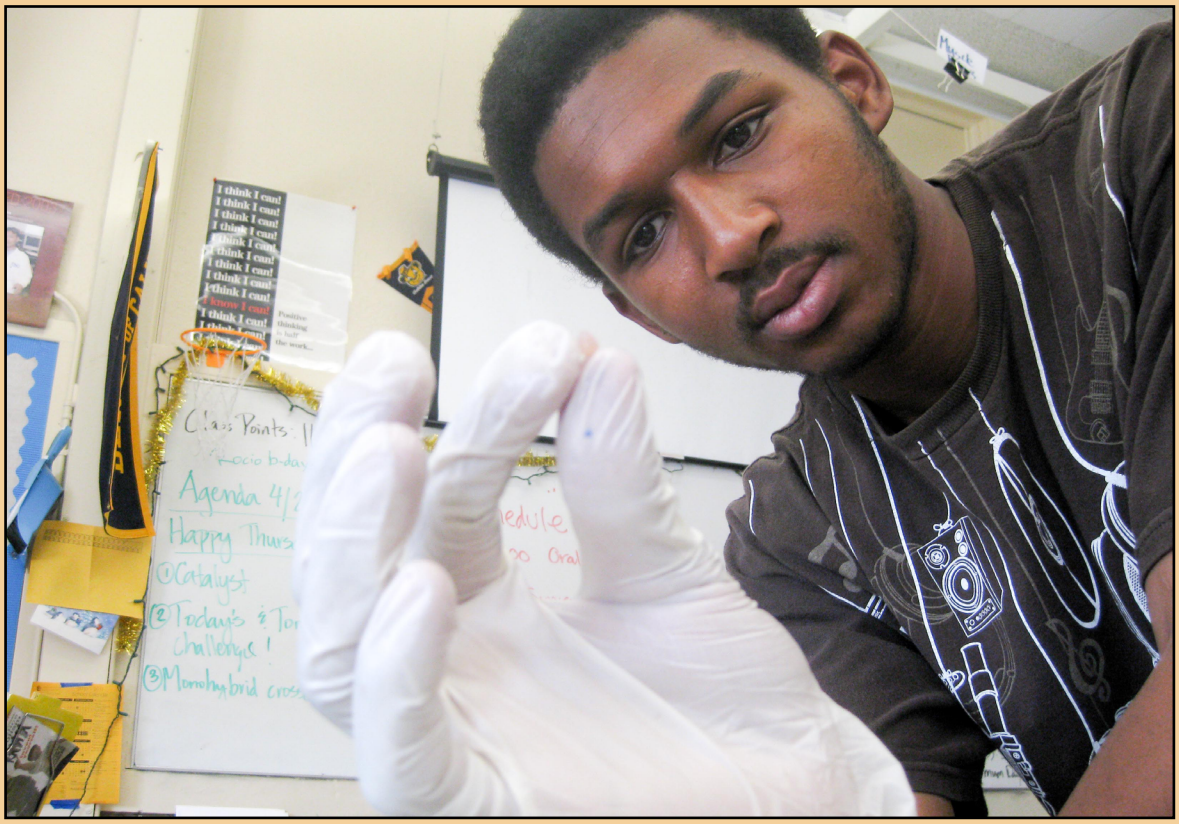

Student-Centered Learning: Life Academy of Health and Bioscience

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scope
Stanford Center for
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Overview

About SCOPE

The Stanford Center for Opportunity Policy in Education (SCOPE) was founded in 2008 to foster research, policy, and practice to advance high quality, equitable education systems in the United States and internationally. SCOPE engages faculty from across Stanford and from other universities to work on a shared agenda of research, policy analysis, educational practice, and dissemination of ideas. SCOPE is an affiliate of the Stanford University Graduate School of Education and the Center for Comparative Studies in Race and Ethnicity (CCSRE) at Stanford.

About Student-Centered Practice

Student-centered practice is a school reform approach driven by student learning and a commitment to equity. Student-centered practices are flexible and responsive to students' needs. They emphasize positive and supportive relationships between students and adults in schools, which enable students to persist and succeed in academic environments that are challenging, relevant, collaborative, student-directed, and applied to real-life situations. Research shows that this is the type of setting necessary for students to develop the skills to succeed in college, career, and life. Students are assessed on their mastery of knowledge and skills and have multiple opportunities to demonstrate that mastery. Educators are supported in creating a student-centered learning environment through opportunities for reflection, collaboration, and leadership.

Student-centered practices are more often found in schools that serve affluent and middle-class students than those located in low-income communities. Addressing the opportunity gap for low-income students and students of color requires an examination of how to implement student-centered practices in schools serving those students with the most to gain from them.

Student-Centered Schools Study

The Student-Centered Schools Study, funded by the Nellie Mae Foundation, looks closely at four California high schools that use either the Linked Learning or Envision Schools model to achieve positive outcomes for all their students. These schools all serve predominately low-income students and students of color. These signature models of student-centered learning can inform efforts to address the national opportunity gap through student-centered practices.

Case Study Schools

School type	School	Location
Linked Learning	Dozier-Libbey Medical High School	Antioch, CA
	Life Academy	Oakland, CA
Envision Schools	City Arts & Technology High School	San Francisco, CA
	Impact Academy	Hayward, CA

Linked Learning began as a state-wide district initiative funded by the James Irvine Foundation to support implementation in nine districts across the state. The program has expanded through state funding since 2011 to include nearly 70 additional local educational agencies. Linked Learning integrates rigorous academics with career-based learning and real-world workplace experiences.

Envision Schools is a small charter network focusing intently on creating personalized learning environments in which educators also create project-based assignments that foster development of 21st century skills such as critical thinking, problem solving, and collaboration.

Both of these models show clear evidence of engaging and developing high levels of proficiency for students of color, English learners, and low-income students at levels that far exceed traditional schools serving similar students. In addition, the schools in this study provide the types of learning experiences that prepare students for college and meaningful careers as well as graduating students of color, English learners, and low-income students at rates that exceed similar students in their districts and California.

Case Studies and Research Methodology

This case study is one of four written by SCOPE about student-centered practices in schools.

The case studies address the following questions:

1. What are the effects of student-centered learning approaches on student engagement, achievement of knowledge and skills, and attainment (high school graduation, college admission, and college continuation and success), in particular for underserved students?

2. What specific practices, approaches, and contextual factors result in these outcomes?

The cases focus on the structures, practices, and conditions in the four schools that enable students to experience positive outcomes and consider the ways in which these factors are interrelated and work to reinforce each other.

The researchers employed mixed methods to look at the micro-level of classrooms and schools. Data collection for this study was conducted between March 2012 and September 2013. Quantitative analysis was used to compare short- and long-term student outcomes in the case-study schools with similar students in other schools in the same district. Qualitative data collection activities included formal interviews with administrators, teachers, students, parents, and community members; observations of instruction, advisory, professional development, teacher collaboration, student exhibitions and defenses, community events, and graduations; and a review of essential documents.

Post-graduation data were a critical component to understanding the long-term impact of the schools' practices. We surveyed and interviewed graduates from each school and tracked their higher-education enrollment through the National Student Clearinghouse. Additionally, two of the schools in this study were simultaneously participating in the Study of Deeper Learning Opportunities and Outcomes funded by the William and Flora Hewlett Foundation and conducted by American Institute of Research (AIR). Rather than survey these schools twice, we used their survey results of teachers and students and used the AIR survey to collect data from the other two schools. Employing this survey enabled us to draw on the full data from the survey, which included a comparison sample of 12 additional schools.

The case studies have been verified with key members of each of the schools for factual accuracy. Details about the data collection activities for this study can be found in Appendix A.

Resources

Findings from the Student-Centered Schools Study are published in four case studies, a cross-case analysis, a policy brief, and practitioner's tool. Visit http://edpolicy.stanford.edu/projects/633 to view these products.

Introduction

It was time for Cesar's 10th-grade "firewalk," the important end-of-year ritual in which his peers would decide if he was ready to enter the 11th grade. Even though his faculty advisor, Miguel, was there in the circle around Cesar, along with many other students, it was a fellow 10th grader, Diego, who would facilitate his firewalk and be the only other person inside the circle. During the next 20 minutes, Cesar would share how he has grown in the past two years and his goals and strategies for his junior and senior years. But that wasn't what made him nervous. He was thinking about the 30 minutes after his presentation, when the other students and his advisor would also discuss his first two years, challenging Cesar's ideas and assumptions, and even questioning his honesty, the clarity of his goals and strategies, and his commitment to reach them. Cesar knew that he couldn't sugarcoat his mistakes, minimize his achievements, or be vague about what needed to change, because by the end of the firewalk he needed the group to stand, symbolizing that they stood with him, believing in his ability to succeed, and that they would be there if he needed them.

The firewalk, an intensive reflection and rite of passage event, is one of many powerful ways that Life Academy, a small public high school in the Oakland Unified School District (OUSD), weaves a student-centeredness into nearly every aspect of its work and culture. Its goal is to prepare its 273 students to become future health professionals within the biological sciences, and among all Oakland public high schools, Life Academy has the second highest college-going rate for 4-year public universities and the highest percentage of graduates who meet the eligibility requirements for California's public universities.[1] The school's focus on students is evidenced through its college and career preparation coursework, inquiry-based pedagogy, health and science career internships for every 11th- and 12th-grade student, a 4-year advisory program, inter-disciplinary performance assessments, a wide array of student interest-driven "post-session" classes during the final 2 weeks of the year, and rituals such as the firewalk. All of these

Life Academy of Health and Bioscience Demographics 2012-2013

Size:	273
Latino:	84%
African American:	6%
Asian and Pacific Islander:	6%
All other ethnicities:	4%
English language learner:	30%
Special education:	12%
Free/reduced lunch:	99%

Source: http://dq.cde.ca.gov/dataquest/

[1] Correspondence with Kevin Schmidke, Data Analyst, Oakland Unified School District, November 13, 2013.

structures and practices orient the entire school to be responsive to students' needs, interests, and contexts, and to believe in their potential for success.

This case study describes how Life Academy's focus on students drives every decision: what and how to teach authentically, what structures will equip students and teachers to know and believe in each other, and how to bring out the best of the students and their community. The case includes a description of the school and its outcomes, the major performance assessments, the college and career preparation curriculum including the internships, the student supports, supports for teachers to engage in this work, and the ongoing challenges of the school. Please see Appendix A for research methodology and data sources.

School Description and Outcomes

Life Academy is located in the East Oakland neighborhood of Fruitvale, named for the fruit orchards (primarily apricot and cherry) that dominated the area in the late 19th century. After the 1906 earthquake in San Francisco, many families migrated to the neighborhood, and it was annexed by Oakland by 1909. During and after World War II, many African American and Latino families lived in West Oakland, but when a new freeway was built in that area of the city as part of urban renewal in the 1980s, those families were displaced and they settled in Fruitvale. The neighborhood is now comprised of a majority of Latino residents, and throughout are Latino-owned businesses alongside public mosaics and murals by Latino artists.

Life Academy was the first new high school opened during Oakland's community-driven movement for small autonomous schools in the 2000s. Opening in the fall of 2001, the health academy was designed based on research of effective, small, learning communities, and it was originally housed within a large comprehensive high school. The two co-directors of the health academy, frustrated by the lack of coherence in the house-academy system—students took some classes within the house and others out, hiring and placement was done by administrators outside of the house—applied to become Oakland's first new high school in 33 years. The directors worked with families and community members as well as biotech and healthcare companies to design an autonomous school that would be safe, hold students to high standards, and prepare them to work in the health care and bioscience fields. Life Academy's mission is:

> To dramatically interrupt patterns of injustice and inequity for underserved communities in Oakland. Through transformative learning experiences focused on health, medicine, and bioscience, students are engaged in learning and inspired to acquire the skills, knowledge, and habits necessary to succeed in college and careers in the medical field.

Life Academy has no separate application requirements. Instead, like nearly every high school in the Oakland Unified School District (OUSD), its students enroll through the district's citywide "options enrollment" process. After the opportunity to visit high schools with their families during the winter quarter, ninth graders submit an options application to rank their school preferences. OUSD sends assignment letters by mid-March, and students register in August. Because Life Academy is so heavily requested, in 2011-12 it was able to accept only 39% of students who listed it as their first choice. Life Academy's students come primarily from the surrounding neighborhood, but as the

school's record of success has become more widely known, students commute from all corners of the city. There are no competitive athletic teams or arts programs to attract students, but many students say they come to Life Academy because it is safe and small, especially compared to their neighborhood comprehensive high school, and it gives them a "real chance" of attending college. The school does not cream students: The percentage of English language learner students (30%) is the same as OUSD's; 99% of the school's families qualify for free or reduced-price lunch; and approximately 50% of students' parents did not complete high school. Despite these hurdles, Life Academy is realizing its mission of interrupting patterns of inequity for its students. Because of its significant achievements with high school students, in 2011, OUSD approved Life Academy's expansion to middle school grades, growing one middle school grade each year. In 2013-14 the school serves students in grades 6-7 and 9-12.

All students select one of the school's three career pathways—medicine, health, or biotechnology—and take courses and complete an internship aligned with that pathway. To support these internships, the school has developed deep relationships with several industry partners including Oakland Children's Hospital, Youth Bridge (Alta Bates and Summit hospitals), and Highland Hospital. Besides the internships, hallmark instructional elements of the school include an emphasis on personalization, cross-disciplinary projects, public demonstration of mastery, a college preparatory curriculum, and productive group work.

The school's belief that every student can enroll in a California public university, and the school staff's commitment to make that happen, is not one to be taken for granted in Oakland, where youth statistics can be very discouraging. Less than half of African American and Latino students in Oakland graduate from high school,[2] and less than half of those graduates enroll in college.[3] Unfortunately, these results are only part of the portrait of Oakland youth. Nearly one third of Oakland children live below the poverty line;[4] almost half live in families where no parent has full-time, year-round employment;[5] and 70% of Oakland youth live in a household where the head has only a high school education or less;[6] all of which reflect the effects of inter-generational, inadequate

[2] Oakland Fund for Children and Youth, "Oakland Youth Indicator Report" 3/16/12, referencing Cohort graduation rate 2007-2010 by California Department of Education data disaggregated by race by OUSD's Research, Assessment, and Data department.

[3] Oakland Fund for Children and Youth, "Oakland Youth Indicator Report" 3/16/12, citing California Department of Education Educational Demographics Unit: 2008-2009 High School Graduates' College Enrollment: State Fiscal Stabilization Fund Postsecondary Indicator

[4] Oakland Fund for Children and Youth, "Oakland Youth Indicator Report" 3/16/12, citing U.S. Census 2010: 2010 American Community Survey 1-Year Estimates, Table DP03: Selected Economic Characteristics

[5] Oakland Fund for Children and Youth, "Oakland Youth Indicator Report" 3/16/12, citing Annie E. Casey Foundation, Kids Count Data Center: "Oakland children living in families where no parent has full-time, year-round employment, 2007"

[6] Oakland Fund for Children and Youth, "Oakland Youth Indicator Report" 3/16/12, citing Annie E. Casey Foundation, Kids Count Data Center: Profile for Oakland: "Children by Household Head's Educational Attainment, 2009"

education as well as a significant immigrant population (one quarter of OUSD students are English learners).[7] A number of statistics reflecting experiences in earlier grades preview unsuccessful high school outcomes: One out of nine students in OUSD is chronically absent and nearly one quarter of African American boys are chronically absent,[8] with nearly 40% of African American boys suspended during middle school.[9] Despite these unfavorable odds, the staff and partners of Life Academy, by focusing deeply on the students—not only on their needs, but on their potential—are achieving remarkable success compared to other OUSD schools, with the highest percentage of graduates having fulfilled entrance requirements for California's public colleges and universities.

On most standardized test measures, Life Academy students perform higher than the district average, and when compared to the district average among students who are economically disadvantaged (99% of Life Academy's students are economically disadvantaged), Life Academy's students significantly outperform their peers. These measures include the California Standards Test (CST), the state's annual standardized test, and the California High School Exit Examination (CAHSEE), a test required for high school graduation (see Table 1).

Table 1: CST and CAHSEE Proficiency and Passing Rates (2012-13)

Assessment	Students	Life Academy	OUSD
Grade 11 CST ELA scoring proficient or above	All students	34%	29%
	Economically disadvantaged	34%	23%
	Latino	35%	23%
CST algebra scoring proficient or above	All students	22%	18%
	Economically disadvantaged	22%	15%
	Latino	23%	15%
	English learners	13%	7%
CAHSEE ELA, passing	All students	76%	63%
	Economically disadvantaged	76%	59%
	Latino	73%	57%
	English learners	46%	27%
CAHSEE math, passing	All students	90%	68%
	Economically disadvantaged	90%	65%
	Latino	88%	61%
	English learners	77%	48%

Source: California Department of Education, Dataquest. http://dq.cde.ca.gov/dataquest/

[7] Oakland Fund for Children and Youth, "Oakland Youth Indicator Report" 3/16/12, citing California Department of Education Educational Demographics Unit: 2010-11 English Learners, Instructional Settings and Services

[8] Defined as being absent 10% or more of the academic school year. Oakland Fund for Children and Youth, "Oakland Youth Indicator Report" 3/16/12, citing Hedy Change: "Chronic Absence in Oakland Schools" August 15, 2011

[9] Oakland Fund for Children and Youth, "Oakland Youth Indicator Report" 3/16/12, citing Oakland Unified School District Task Force Summary Report: African American Male Achievement

In the absolute, many of these academic data fall short of Life Academy's expectations. Nonetheless, its students are outperforming their peers throughout the city, an important and laudable achievement. Beyond standardized testing, a sampling of disciplinary data suggests that Life Academy's culture is fundamentally different from other schools; in 2011-12, Life Academy expelled no students, compared to students in the rest of Oakland's schools (K-12), which averaged 43 expulsions during the year.[10]

The cumulative effect of Life Academy's efforts is reflected in a graduate rate that is significantly higher than the rest of Oakland's schools, with an even more stark difference when compared to the percent of graduates who have fulfilled course requirements for admission into the University of California and California State University systems, called "a-g" requirements (see Table 2).

Table 2: Graduation Rates and Course Completion Rates (2011-12)

Graduation rate and course completion	Students	Life Academy	All OUSD students
Cohort graduation rate for class of 2012	All students	71%	59%
	Economically disadvantaged	71%	58%
	Latino	68%	52%
	English learners	50%	46%
Graduates completing all courses required for UC/CSU admission	All students	87%	51%

Source: Data from http://dq.cde.ca.gov/dataquest/

Graduates attend colleges that include UC Berkeley, Stanford, University of San Francisco, UCLA, UC Davis, UC San Diego, Smith College, and San Francisco State. The significance of the school's graduation rate as the second highest in OUSD schools, and the school with the highest percentage of graduates satisfying the demands of California's public university systems' eligibility requirements, cannot be overstated. Considering that only 6% of Life Academy's students come from families in which the mother or father earned an associate or bachelor's degree, it is with honesty and appreciation that one Life Academy graduate stated simply, "Thanks to Life Academy I was able to attend college."

Life Academy graduates identify a number of experiences at Life Academy that helped them prepare for college (see Table 3, page 7). These include relationships with adults, self-evaluation and reflection, and other aspects of the academic program.

[10] CDE web site. For graduation rate, 2012-13; for student behaviors, 2011-12 (most current available).

Table 3: High School Experiences That Contributed to College Readiness

Areas of preparation	Somewhat helpful (very helpful)
Relationships with teachers and advisors	93% (55%)
Projects and major assignments	88% (50%)
Workplace internship	93% (55%)
Advisory	88% (40%)
English and humanities courses	88% (43%)
Explaining my thinking	93% (50%)
Testing or trying out my ideas to see if they worked	93% (50%)
Evaluating myself on my class work	95% (53%)
Trying to find answers on my own before the teacher answered my questions	95% (53%)
Teacher conference with me so I could talk about what I was learning in class and how well I was doing	88% (48%)
Preparing and giving presentations	88% (53%)
Participating in peer review of work	90% (46%)
Discussing my point of view about something I had read	88% (48%)
Choosing my own topics for projects, presentations, and assignments	88% (50%)
Having to revise my work until it meets standards of proficiency	93% (60%)

Source: Graduate Survey

Importantly, and consonant with Life Academy's emphasis on the internship experience, one of the highest rated answers by graduates in Table 3—"Explaining my thinking"—was also cited as one of the activities at Life Academy that was most helpful in preparing them for the world of work (86% somewhat helpful, 50% very helpful), and nearly half (43%) of those working reported taking on leadership positions since beginning work (e.g., managing people, leading a project, etc.).

Habits and interests promoted by Life Academy have continued through college: 60% of Life Academy graduates surveyed are currently majoring in a bioscience or health services field, and nearly two thirds have taken advantage of the academic supports offered by their college. The school's emphasis on challenging academic content and skills, peer collaboration, real-world experiences, seeing adults as resources, and personal goal-setting, helps to explain why one graduate said, "I feel like high school gave me an introduction into what college would be like."

Personalization

Whether it is an advisor checking in with a student who has a sick relative, a teacher offering a student an extra tutoring session after school, or a secretary encouraging seniors to stay on track for their senior project defenses, there is an atmosphere of personalized care throughout Life Academy. With only 273 students in Grades 9-12, Life Academy personalizes students' experiences in ways that larger high schools usually cannot, and other small schools often don't. As a result, the school's powerful culture of care and trust between teachers and students fuels a deep belief and confidence in the potential of every student.

Relationships between Life Academy teachers and students that support this culture are shaped by prolonged and varied interactions. Because at such a small school the teachers wear many different hats, it is not unusual that at a student's senior defense, the advisor who is fixing the student's tie and giving him encouraging words taught him in three different levels of Spanish, taught him physical education twice, completed two firewalks with him, and went on two class field trips with him.

Because of the many different ways that teachers know students during their 4 years, Life Academy's structures give teachers volumes of information about students so that, according to a math teacher, "Teachers here see students as the whole student and not just a student in their classroom." This understanding encompasses students' needs, interests, strengths, personalities, and contexts. With this familiarity with the many faces of a student's identity, teachers can empathize with each student's struggles and still remain steadfast in their beliefs in each student's potential.

Table 4: Students Feel Cared For

I agree (strongly agree) that in my school this year...	Life Academy students	Comparison school students
There is at least one teacher who really cares about how I am doing in school.	98% (58%)	63% (27%)
The teachers here respect me.	98% (63%)	62% (22%)
People here notice when I'm good at something.	95% (41%)	57% (16%)
There is at least one teacher who would be willing to help me with a personal problem.	94% (52%)	64% (24%)

Source: Student Survey Data[11]

As a result, their students feel known and deeply cared for, an experience that is significantly different than that of their peers at other schools, as is shown in Table 4. This doesn't happen accidentally but is a carefully constructed set of strategies, rituals, and events that personalize relationships and learning.

Advisors and Advisees: A Success-Oriented Partnership

No Life Academy staff member knows a student better, in more ways, and over more time, than the advisor. One of Life Academy's students described his advisor as the person who knows him best outside of his family: a confidante, someone he "could go to with problems," and with whom he felt safe expressing fears and concerns.

Every student as a ninth grader is assigned an advisor and stays with that advisor throughout high school. Advisors meet with their 20-25 students four days each week for 45 minutes. To begin with, advisors spend 5 minutes checking in with advisees. After the check-in, on Mondays and Thursdays the advisories have sustained silent reading, Tuesdays are study hall, and Fridays are community-building activities. These community-building activities range from potlucks and ice breakers to inter-advisory athletic challenges, firewalks, and community "sharing circles" in which students discuss current events in their lives in order to process and problem-solve with each other. At its core, the advisor-student relationship depends on a foundation of trust and fellowship within the advisory so that students feel safe to share what's on their minds and seek help from both the advisor as well as the other advisees. A key role of the advisor is that of the guidance counselor. The school has a Google doc where advisors can see each student's progress in courses, and during advisory, an advisor may spend time talking with a student about a drop in grades, helping the student develop a plan to prepare for the next exam in that class, assisting advisees to set academic goals, and tracking

[11] Student Survey Data includes 135 students, 40% of students. Comparison data is taken from The Study of Deeper Learning Opportunities and Outcomes funded by the William and Flora Hewlett Foundation and conducted by the American Institutes for Research that included several of the schools in this study. The student comparison sample with a total of 1392 students comes from 10 schools across the country.

students' graduation progress and college readiness. In a late spring faculty meeting, advisors are required to review student transcripts in order to recommend them for summer school, a particularly critical role because most of Life Academy's students come from families that did not attend college, and may not have been on college-preparatory course paths. The advisor is in the most knowledgeable position to ensure the student completes all graduation and college application requirements.

Advisors must also partner with the student's family—not only to build trust and relationships, but also to be the school's liaison and primary contact. To parents and guardians, particularly those who did not have positive experiences when they were high school students, having a friendly contact in the school who knows them and their child allows them to engage more authentically in their child's high school education. Many advisors spend the first part of the year visiting the home of each advisee to build that relationship and to be familiar with more of each student's unique context. Because advisors schedule, organize, and host student-led parent-teacher conferences, they initiate contact with families, communicate with families regarding students' progress, and form partnerships around student growth. The advisor is also responsible for communicating success stories and teachers' concerns to the parents, as well as sharing the parents' concerns and questions with their advisees' teachers. With so much invested in the family-student-advisor relationship, Life Academy teachers report that 85% of their students' parents attend scheduled parent-teacher conferences, compared to only 55% reported by teachers in the comparison schools. A final key role of the advisor is to approve their senior advisees' defense research topics, a responsibility that directly involves them in the most significant academic experience of their year.

Being familiar with advisees' lives and observing how they develop and grow over multiple years, the advisor is positioned to be the primary advocate, resource, and support for the advisees. Knowing the students in so many ways and over multiple years, the advisor is most aware of the student's potential and the hurdles (in-school and out-of-school) that student must overcome. Advisors are charged with making sure students are succeeding academically and, if not, advisors work with school colleagues and the student to develop strategies to reach the student's potential. As one math teacher explains, it is not unusual for a teacher to look to a student's advisor as expert and partner when a problem arises in class:

> I'll just look up who the advisor is (usually I know) and then shoot them an e-mail. There have been times when we have a three-way conference between the student, me, and the advisor, and then we set up a plan or just have a conversation around: What's going on in my classroom and what I can do to better support you, or what the heck's going on with you that you're acting this way in my class?

When the student is struggling at Life Academy, not only do the adults, specifically the advisor, mobilize to address the challenge, but also the student plays a large role in defining the problem and discovering, and owning, the solution. These are inquiry-

oriented conversations, framed to help teachers learn more about the student's needs and concerns, as well as to collaboratively co-construct a solution that is personalized for that student. The student and advisor have a similar partnership in the student-led parent conferences, held twice each year when the first and third quarter report cards are distributed. Before the advisor discusses the report card grades across all subjects, the student begins the conference by sharing with their parent an artifact from a class where something is going well, and doing the same for a class where the student is struggling. This, too, is a conversation that is designed to reveal information and insight about the student, and to develop solutions. Having students work directly with their teachers to address academic challenges is a drastic departure from students' experiences before Life Academy and in most high schools, in which teachers make unilateral decisions and students are rarely asked to provide insight into their challenges and to co-construct personalized solutions. By a student's senior year, the student realizes that a conversation with a teacher means "I'm not in trouble. This is an opportunity to have a conversation and make sure I'm on the right track and to get support."

Culture-Building Rituals: Field Trips and Firewalks

Another way that Life Academy builds its culture of care, trust, and confidence is by creating school community rituals and rites of passage that push students out of their comfort zone, to be honest about their victories and struggles, and to give them an anchoring memory of their potential for success.

Toward the end of their 10th-grade year, students take a class trip, to cap the year, to Yosemite. For most students, camping itself is an unfamiliar experience, but it is also the farthest away they have been from home, and for many of them, the first time they have

Creating Metaphors for Academic Success

Most of the reason why kids like those at Life Academy don't succeed is all mental. It's that they see barriers in why they can't, why they don't belong, why it's not their right to succeed at things. Even today, I was sitting down with a girl, Marissa, who just started crying. She's a 10th grader and she just finished her 10th-grade year and she said, "You know, I'm never going to pass the CAHSEE," California's high school graduation exit exam. And I said,"Are you for real? Let me go get your scores." She's got a 338: 14 points away from passing, six to seven more correct questions on the math part of the text. Do I fundamentally believe in my heart that she can get seven more questions right in the next two years so she can pass the CAHSEE? No problem! It's a no brainer—it'll happen. It's done. She doesn't believe it, right?

We use their experiences and field trips as metaphors for something bigger. The hike 10th graders take at Yosemite to the top is a hard hike. You're gaining 2,000 feet in elevation, you're going from the valley floor to the top. You're climbing up waterfalls. You're out of shape. You've got bad shoes. Your backpack is torn apart and you've been eating cheese fries and hot chips and soda your whole entire life. You're 50 or even 100 pounds overweight. But you do it.

Taking them in the outdoors and putting them in situations when they're not comfortable gives them some context. "You remember when you were halfway up, your legs were burning, you were wet, cold and miserable in that waterfall but you still made it to the top, right? This is no different, it's just a math problem sitting on a paper." The metaphor plays out well in a lot of areas of a student's life.

—Principal Preston Thomas

been outside Oakland. Similar to the approach of Outward Bound and other wilderness programs, on this trip, students must push themselves and depend on each other to complete unique challenges in unfamiliar surroundings to give them a new perspective of themselves and their peers. For example, students are asked to complete "a 9- or 10-mile hike and up two waterfalls, which is pretty ridiculous" in the words of one student. In one of the rituals of that trip, students are asked to write on paper their "rocks, the burdens they carry with them," and crumple them into the physical shape of a rock. All rocks are placed in a row, and students stand on one side. The accompanying teacher asks them to step over the rocks if they feel like they can move on to the 11th grade despite those burdens. A teacher describes the emotionally powerful reaction:

> There were a number of students in response to all those questions that didn't feel they could step over them, that stayed. And so we asked their classmates to help pull them over the row of rocks, to explain how they were going to help them graduate. It was really emotional. It took a long time, because there were a lot of kids that were on the side of

> "I don't think I can graduate," but there were also a tremendous number of kids who said, "Yes you can." Even kids that don't talk during the day, they said, "I know we're not super close friends, but I've seen you do this specific thing in math class or I've seen you do this," and so they pulled them over. In the past we've had teachers advocate for kids. This year we just facilitated, and the kids did everything: "No, you're coming with me; I will pull you across the line to graduation," and that was really beautiful.

This emotional event focuses entirely on the students' beliefs about themselves and each other. It not only builds a stronger sense of mutual support and community, but also serves as a reference point back at school: When a student struggles, the recollection, with reminders from teachers and peers, builds the confidence in and support of each other. The sidebar on page 12 provides more detail on this topic.

The most intensely personal of Life Academy's rituals are the 10th- and 12th-grade firewalks. As one 11th grader whose two older siblings attended Life Academy humbly describes the firewalk, "That is the time you actually have to be serious."

The firewalk is in a fishbowl format, with a student and a student facilitator in the center of a circle of grade-level peers, a teacher, and other guests whom the walker chooses to invite. The student gives a short presentation reflecting on herself as a learner, and must prove her readiness for the next level of her academic life, whether it is becoming an upperclassman or a graduate. It is a reflective process where the student connects his or her progress to the Life Academy's Habits of Life—love of learning, integrity, fearlessness, and empathy—and then figuratively walks across fire. After the presentation, the student is in the "hot seat" to face questions from a student facilitator, the walker's peers, and the advisor. Because the firewalk happens at significant times in the student's academic career—when entering the school's upper grades and at graduation—by the end of the event the teacher helps the student devise and commit to concrete steps to address the areas of growth discussed during the firewalk. If at the end of the firewalk the group is satisfied that the student is ready, socially and emotionally, for 11th grade or life after Life Academy, each member stands for the student to symbolize, as one 11th-grade student explains, that "We stand with you and believe in your ability to succeed. And we are here for you if you need us." If a person in the group does not stand, that person has to explain the concern, and the student in the firewalk can respond. The firewalk continues until everyone is convinced and stands, or it may be postponed until another day.

This ritual is independent of the major performance assessments—the 10th- and 12th-grade defenses—that are about the student's academic knowledge and skills and are discussed later in this case. Instead, the firewalks focus on the students' social and emotional achievements, especially in light of the personal challenges and histories of many of Life Academy's students. Because of the deep relationships and many shared experiences

among the students, these discussions often include highly personal family issues, romantic relationships, and drug abuse, and they delve into a chronicle of good and bad choices the student has made at Life Academy and elsewhere. It is an opportunity for students to discuss and describe their relationships to family, what sustains them, what they value, and how they reflect and envision their own paths toward success.

The design of the firewalk places the student's life at the core of the discussion, and though the walker's voice is the primary one, most of the other voices in the conversation are the student's peers, not the teacher. Typically in schools, when a student's progress and readiness for the next grade is discussed, it happens among a small group of adults in a private setting, without the student present. Life Academy's firewalks, by contrast, place this discussion among the entire community of students in the grade level. The principal explained why the community of students is so critical to the power of the firewalk, and why the students are active participants in the discussion while the teacher's role is to be an observer and to provide support. He describes, in the voice of a student, what a peer—as opposed to a teacher—is privy to and can "push on":

> What are the areas that you're really deficient in and what are you going to do to change that? And don't BS me because I live right next door to you. I've seen you since you were a little kid, right? Mr. Thomas may not know you as well as I do but I know which kids are sitting there doing drugs; I know which kids are selling drugs; I know which kids have family situations that they're dealing with. I know which kids are not doing their homework and are copying off of everybody. I know all of that and so when I sit down in a forum and we're having this conversation about what it's going to take to get to the next level, I'm going to push you on some of your habits.

In Cesar's firewalk, described in the introduction to this case study, Miguel, the student's advisor, spoke a total of six times as opposed to the more than 20 questions raised by students. In addition, when Miguel did speak, he built upon questions raised by other students or statements from Cesar. The teacher has the important role of guiding the student to plan next steps.

The firewalk's power comes in two ways. First, it helps students to discuss in a public forum how they've succeeded and their specific plan to address their areas of growth. Life Academy believes that each student, including those who have experienced a cycle of academic failures, can overcome challenges with self-knowledge and ownership of a personalized solution. Students actually won't escape from a cycle of failure unless they experience a ritual like the firewalk, as the principal explains:

> You could sit them in seven algebra classes in a row and the district data shows us on every measure they could be ready for algebra. But they take algebra and they fail; they take algebra again and fail. Every single time

> they do that, you are building into them a culture of failure that happens over and over again, and you don't do some "thing" to interrupt it. Often, the students know what it is, but they just don't change. I think the firewalk is an opportunity for us to create a dialogue with kids around what that "thing" is.

The other source of the firewalk's impact is its demonstration that the school's community—both adults and students—cares deeply about students and is committed to their success. The student's very public reflection and accountability are embedded within a supportive and caring community, and the support of that community is made explicit and visible. An 11th grader and recent immigrant, who teachers said sometimes masks her English language difficulty by refusing to participate and being disrespectful, expressed how much it meant for her to know that others are on her side: "They see potential in you and let you know that by standing up for you and supporting you."

These student-centered rituals build a sense of confidence in students—that just as they climbed the waterfalls in Yosemite, they can overcome their "rocks"—and deepen their personalized relationships with adults and with their peers, pairing honesty and vulnerability with a sense of caring, collective strength, and mutual responsibility. But Life Academy's teachers are affected as well. These structures give teachers insight into each individual's uniquely complex combination of needs, interests, goals, challenges, contexts, and influences—and this insight fuels the staff's belief in every student's potential to be successful and their commitment to helping students overcome their challenges. When teachers talk about students who are not achieving or at risk of failing, they speak with hope and concern, and they speak about "not giving up" on their students. One teacher acknowledged all of the trouble a student was in and the distractions in her life, but knew she would make it. He saw her as bright and so capable that he knew he had to hold the line with her. "I have faith in you," he told her. As one student says, "You notice how people actually do care for you and how they actually do want you to succeed."

Compared to their peers in other schools, the results of the school's personalization structures and practices are profound. Clearly, students feel cared for and invested in the

school community and as a result have a greater sense of efficacy and self-confidence about their own capacities as is demonstrated in Table 5.

Perhaps these feelings from students are predictable (for both Life Academy's students and the comparison group's) when 100% of Life Academy's teachers agree that they are responsible that all students learn, compared to only 80% of the comparison group's teachers.

A critically important, but sometimes overlooked, benefit of students feeling supported and believed in by their teachers—and the student success they experience in that kind of academic environment—is that the teachers gain a corresponding sense of efficacy. Many times, teachers feel frustrated and ineffective in the face of students with low skills and from low-income families, but Life Academy teachers seem to feel quite differently as demonstrated in Table 6.

The next section will explore how the culture of care, trust, and confidence in student success sets the stage for the school's core work of its academic program. Drawing upon the structures that personalize students, the school staff build on their relationships and knowledge of students to create a student-centered academic program that combines high student expectations, responsive curricula and instruction, and a network of supports.

Table 5: Students' Self-Efficacy

Students who agree	Life Academy	Comparison schools
Even when things are tough, I can perform quite well.	81%	49%
I believe I will be able to overcome challenges.	88%	57%
I believe I will be able to reach my goals.	89%	59%
I know I can do many different things well.	88%	58%

Source: Student Survey

Table 6: Teachers' Sense of Efficacy

Teachers feel they can do "a great deal" to . . .	Life Academy	Comparison schools
Keep students on task on difficult assignments	69%	24%
Control disruptive behavior in the classroom	69%	38%
Promote learning when there is a lack of support at home	46%	16%
Overcome the influence of adverse community conditions on students' learning	31%	10%

Source: Teacher Survey[12]

[12] Teacher Survey is of 13 teachers, 81%. Comparison data is taken from The Study of Deeper Learning Opportunities and Outcomes funded by the William and Flora Hewlett Foundation and conducted by the American Institutes for Research that included several of the schools in this study. The teacher comparison sample with a total of 356 teachers includes results from 12 schools across the country.

Academic Program

> A lot of traditional schools are direct instruction in which the student needs to be sitting down silently and recording notes for 40 to 50 to 60 minutes straight, and retain this information and think critically on his or her own without having discussions, and then take a test that's written or multiple choice questions. I think that's a very narrow way of accessing student learning and engagement.
>
> —*Life Academy math teacher*

Like its student-centered approach to relationships and culture, at Life Academy, the school's academic program is driven by its understanding of each individual "whole student" and its belief in each student's potential to attend college and have a successful career.

Graduation requirements at Life Academy are aligned with the University of California and California State University systems' entrance requirements, and therefore the 4-year course sequence that students take is nearly entirely comprised of core academic classes, with few electives. Graduation requirements and typical course progression can be found in Appendices B and C. During the sophomore and junior years, students take a double-period humanities class that combines English and social studies. All students are expected to take calculus their senior year, but because incoming ninth graders have a range of math backgrounds, students are placed into different math tracks in order to prepare them for calculus. All students also take 2 years of Spanish—for native or non-native speakers—and some students are assigned to a Read 180 reading intervention course depending on their prior educational preparation. To support their school's specialization in health and bioscience, every student takes an extra science course in Grades 10-12, thereby exceeding California's requirements, and completes an internship within career areas related to health and bioscience during junior and senior years.

In addition to its course sequence, Life Academy's academic program has unique approaches to teaching and learning. The school uses a student-centered pedagogy that includes productive group work and inquiry-based learning, pairs it with a rigorous curriculum that allows for student choice and voice, and provides supports and scaffolding that are responsive to individual student needs. The result is a classroom experience for students that draws

Life Academy's Habits of Mind

- **Effective communication**
- **Professionalism**
- **Perspectives**
- **Evidence**
- **Logical reasoning and analysis**

Life Academy's Habits of Work

- **Focus and precision**
- **Organization**
- **Revision**
- **Cooperation**
- **Effort**

upon and reinforces the school's culture of community support and belief in student success.

The school frames the priorities of its academic program as *Habits of Mind* and *Habits of Work*: cross-disciplinary ways of thinking and learning, outlined in the sidebar on page 17. The school uses high-stakes performance assessments that include these habits for students to demonstrate mastery. Benchmark assessments, called *certifications*, are embedded into each academic course as requirements for passing the course, and in addition to their graduation requirements, students must successfully complete major performance assessments called *defenses* in the 10th and 12th grades. The certifications are assessed by the Habits of Work, and the 12th-grade defense—the school's most serious high-stakes assessment—is evaluated not just by the content of the students' presentations but also by their successful demonstration of the Habits of Mind. Because of this, the teachers have created an academic program that is guided by the Habits of Mind and Habits of Work to prepare students for the major assessments, the culminating defense, and post-secondary success.

Pedagogy: Deliberate Design With Students at the Center

Life Academy's lesson design is as deliberate as its personalizing structures. Teachers plan purposeful instruction, explicitly describe high and specific expectations for student performance, organize productive group work, create inquiry-based opportunities for learning, and create a classroom culture that embraces mistakes.

Instructional Snapshot: Deliberate Lesson-Planning

As students enter the ninth-grade English classroom, the agenda is neatly written on the board and examples of the papers that the agenda items refer to are taped on the board so students know exactly what to pull from their binders. Students do a warm-up comparing the book they have just finished, *Twilight Los Angeles*, with the book they are about to begin. Based on the information on the cover and back cover, they predict how these books are connected and how they differ. While they are doing the warm-up, the teacher circles the room checking homework. In a few minutes, the teacher calms the class with a chime and posts lists of pre-arranged student pairs on the board, and then the class begins reading. They begin with whole group reading, and five pages later they move to partner reading, when they are expected to take turns reading aloud while answering two simple recall questions in the reading guide the teacher has provided. For the final 15 minutes, students self-organize into groups of three and delegate reading parts. These transitions appear rehearsed, as students simply look to a potential partner for confirmation, gather their things, and move with little disruption. While reading they take notes on what they determine is valuable to remember. The next day the reading happens in the opposite order, beginning with the small group, to table partner, to whole class, and finishing with silent individual reading to strengthen the confidence and ability of students to read and comprehend independently.

During warm-ups, teachers at Life Academy move around the room checking homework or connecting with individual students. Materials for students are organized and accessible, and students are expected to get the tools they need whether they are Post-it notes, hanging folders, or flash drives. Learning targets are clear and explicit, agendas are posted, and there are specific outcomes expected for each activity within a class session. Teachers scaffold skills and content within a class, several days, or even weeks, so that their students can engage in complex and rigorous content. For example, humanities teachers, preceding a class discussion on theme and figurative language, spend days preparing, first sharing models of figurative language for students, then helping students to refine their own examples of figurative language from the novel, and then having students practice how to have a productive discussion using specific statements or sentence starters ("Can you add more detail?" and "This example shows how . . ."). The science teacher, in building up to a lab in which students identified cells that carry cancer genes, spent a day helping students understand how a pipette is designed and how to read its measurements, projecting the lab sheet on the board in order to annotate the document, telling the class, "This is what you should be doing," and explaining how each of these different skills will be crucial in conducting the successful lab, a procedure identical to what medical students do. In their scaffolding, teachers frame the discrete steps for a successful activity within the larger context or essential question. (A further example can be found in the sidebar on page 18.)

A key aspect of Life Academy's pedagogical approach to student-centered learning is productive group work; 75% of Academy students surveyed reported that they work with other students on projects in three or more classes, compared with only 43% of

students in the comparison schools. Teachers thoughtfully organize students into different sized groups depending on the task, and students have clear roles, such as facilitator, team captain, and reporter/recorder, to which the teacher holds them accountable—the math teacher kicks off the activity with, "Facilitator, get the conversation going in your group." Confirming the teachers' belief that when processes and procedures are clear to students, they can work more productively together rather than negotiating roles and expectations, students move into different group structures with little disruption, and comfortably take on their responsibilities. The bioscience teacher tells students, after they've attempted to solve a problem, to "turn to your partner and convince them of your answer." In another class, students are asked to talk with several different people about their assignment, encouraging students to "find someone you don't talk to often." Asking students to work together gives teachers the flexibility to provide tailored assistance to the groups.

Students work collaboratively not only because teachers see peer discussion as critical for the learning process, but also because productive group work strengthens classrooms as communities of learners who support each other and hold each other accountable. Teachers expect that students will learn more when they push each other's thinking and have shared responsibility for each other's understanding. In a science discussion, Carlos, the materials manager, inquires about his fellow group member's understanding—"Sally, do

you understand? Are you ready?"—before he signals to the teacher that they have completed the assignment and are prepared to respond to the teacher's questions. The teacher may ask any member of the group to explain and defend the group's answer, which creates authentic dialogue within groups where students are seeking to teach and learn from their classmates and feel shared responsibility for each group member's success. And it is not always that the higher-achieving student is responsible to lift the group's thinking. As the math teacher has observed, "The lower-skilled students have the really deeper conceptual questions, if they have the confidence and the communication skills to ask those questions." To Life Academy teachers, all students come with resources that, if tapped into, can improve their own as well as their classmates' learning.

Another important aspect of Life Academy's pedagogy is that teachers organize instruction to be inquiry-based, where students actively construct meaning rather than rely on the teacher to give them answers. In a 12th-grade physics class studying sound waves, the groups are given an inflated balloon, a lit candle, and a toilet paper roll and tasked with extinguishing a candle flame without blowing it out with their breath, along with a chart on which students document each attempt and their observations. In a math class the teacher leads a discussion that generates how different groups solved the same problem in different ways. In the 11th-grade humanities course, a unit poses the essential question of "Is capitalism or socialism better for America in the 20th century?" Each student explores two different narratives—one that supports socialism and one that supports capitalism—with primary sources from the Industrial Revolution to the New Deal, and the teacher believes it is vital that he "allow the students to come up with their own ideas." Each student then decides, writes about, and defends in discussion which economic model is the better response to the question.

In the 12th-grade English class, to deepen their understanding of the novel *Macho*, students generate discussion questions for the class to consider, such as "Why is machismo such a big part of many cultures?" and "Is strength shown by having pride?" Nowhere is this inquiry-based approach to learning more evident than in the senior defense project, in which students select and formally propose their own research question, and after approval, spend several months conducting their own investigation, including interviewing an expert on the subject, and ultimately present and defend the answer in the senior defense. Not surprisingly, teachers at Life Academy believe, at rates higher than teachers in a comparison sample, that their role is to facilitate students' own inquiries (100% vs. 84%), and students report more frequent agency and ownership of their learning, and synthesis and application of ideas, than students in the comparison schools (see Table 7, page 22).

Teacher survey data also reveals teachers' commitment to an inquiry-based approach to learning as shown in Table 8 (page 22).

Table 7: Student Learning

Of your English, math, science, and social studies classes, how much is this statement true for *3 or more classes*?	Life Academy	Comparison group
My teacher lets me test or try out my ideas to see if they work.	64%	35%
My teacher helps me learn to use different sources of information.	80%	44%
My teacher pushes me to become a better thinker.	81%	47%
My teacher makes us try to find the answers on our own before he or she answers our questions.	70%	52%
My teacher gives us activities to do, other than just listening to him or her.	80%	54%
I use what I've learned to solve new and different problems.	61%	41%
I combine many ideas and pieces of information into something new and more complex.	41%	25%

Source: Student Survey

Table 8: Teacher Commitment to Inquiry-based Instruction

Teachers agree (strongly agree) that . . .	Life Academy	Comparison group
Thinking and reasoning processes are more important than specific curriculum content	100% (69%)	85% (35%)
Students should be allowed to think of solutions to practical problems themselves before the teacher shows them how they are solved	100% (77%)	91% (35%)
Students learn best by finding solutions to problems on their own	93% (62%)	81% (31%)
My role as teacher is to facilitate students' own inquiries	100% (77%)	84% (37%)

Source: Teacher Survey

Appropriately, because Life Academy teachers create learning activities where students are asked to engage in a process of constructing their own meaning, there is a growth-mindset orientation to accept and encourage mistake-making. One teacher has the word "YET" in large print on the front wall—to imply that students' knowledge and skill success is only a matter of time—and has a poster that states, "Deeper understanding is the result of confusion, practice, and reflection." The student survey results reinforce the extent that teachers encourage students to make sense of their learning process (see Table 9).

Table 9: Opportunities for Reflection and Revision

Of your English, math, science, and social studies classes, how much is this statement true for *3 or more classes?*	Life Academy	Comparison group
My teacher often asks me to revise my work after I get feedback from teachers or other students	67%	19%
My teacher asks us to explain our thinking	68%	26%
My teacher asks us to evaluate ourselves on our class work	45%	16%

Source: Student Survey

The school recognizes that embracing mistakes and emphasizing growth are necessary to combat the years of failure and consequential low self-esteem that many of Life Academy's students previously experienced, and to build students' confidence in eventual success. As the algebra teacher explains:

> Students are so trained and so afraid of being wrong, and that if you have the right answer and you get it the fastest then you are the smartest. I really want to dispel that on the first day of school and every single day thereafter. The second thing that I want to dispel is that the feelings of confusion and frustration and not knowing mean that you're dumb. Rather, those feelings, and I say this explicitly with my students, are about you getting smarter and working your brain. I want students to think, 'Damn, when I'm stuck, it's not 'cause I'm dumb, it's 'cause I'm thinking, and now what do I need to do to get out of this confusion?' Working in groups every day sends a message to kids that this is how you're going to get through confusion: by talking out your problems and by valuing and listening to what your group mates have to say.

These characteristics of Life Academy's pedagogy—carefully organized instruction, high expectations, students collaborating and relying on each other, teachers trusting students to make their own meaning, and encouraging risk-taking and acceptance of mistakes—are all evident in this short excerpt of a ninth-grade algebra class discussion, where Hector comes to the front board of the class to explain his solution to the math problem (X+2)(X-Y+3):

> Hector: I see some people disagree. Do you have questions? Seriously, say why.
> Enrique: I disagree because. . .I don't know.
> Teacher [to the class]: Take a risk. Ask the question to take care of yourself.
> Jacqui: How did you know the box [a process to solve the problem] would be 2 by 3?
> [Hector explains and mentions that in the process of solving, he "combines" terms.]
> Teacher: To me, *combine* means *add*, and you said "combine."
> Hector: I guess I mean *simplify*.
> Teacher: Mariel? Go ahead. Your question might be someone else's who is not yet as brave.
> Mariel: Do you have to simplify?
> Teacher: Why is there a 5x up there?
> Kevin: You add 2x and 3x.
> Teacher: Mariel, can you now summarize this for us?
> [Mariel summarizes]
> Teacher: Beautiful summary, thanks. Let's give Hector a round of applause.

In many schools' math classes, a student comes to the board to show her solution, the teacher is the authority, and the other students quietly compare their answers. At Life Academy, the presenting student in this example feels responsible for other students to learn, and students are expected to ask questions and discuss with classmates until they understand, with the teacher as an additional, not authoritative, voice. Students are encouraged to "take a risk" and to voice disagreements, even if they are mistaken. As one student says, "Math classes feel like humanities classes" with a collaborative and discussion-based approach throughout the disciplines, and classroom communities are strengthened because all students have opportunities to share their voices, to take risks, and to learn together.

Curricula: Rigorous, Relevant, and Responsive

Paired with these student-centered instructional practices are Life Academy's curricula and college preparatory including internships and other key projects, all of which prepare students to have the skills and content for success in college and career. Additionally, though some schools choose to organize themselves so that students are insulated from the surrounding community, Life Academy integrates learning experiences that tap into the resources of the Fruitvale and Oakland communities, and even the students themselves, as a springboard to engage students in Habits of Mind skills. And because the school recognizes that the journey to college for its students is an uphill one, teachers draw upon their knowledge of students—students' prior knowledge and experiences, as well as their academic strengths and needs—to create relevant, engaging, and differentiated lessons that are sufficiently scaffolded. These efforts to make the content relevant as well as rigorous result in nearly 80% of Life Academy students responding that what they are learning in their classes is always or usually useful, compared to only 61% of the comparison group of students.

Rigor: Preparing for college and life after Life Academy

Along with a course sequence that is college preparatory and even includes an additional science course each year in the 10th-12th grades to create bioscience and health career pathways, Life Academy teachers design demanding curricula, both in terms of academic content—such as conducting micro-pipetting and infusing gel electrophoresis to map DNA, or understanding the significance of Gallipoli to World War I and its connection to *All Quiet on the Western Front*—and with emphasis on higher-order skills such as critical thinking, defending ideas with evidence, and academic writing. One way that teachers do this is by framing the curriculum within "essential questions" that organize around larger ideas—for example, "How do people survive the horrors of war?" and "Was capitalism or socialism better for Americans in the 20th century?" With these essential questions of content, teachers can nest discrete activities and lessons within more complex ideas and concepts. They can communicate explicitly to students that information is not the goal but a tool to grapple with complex ideas. As one Life Academy teacher told her students, "It's not just about what you hold in your head. I'm not teaching you to memorize; I'm teaching you to think critically."

Life Academy teachers also make learning more rigorous by organizing curricula across content areas. For example, in addition to the 10th-grade double-period Humanities course that combines English and social studies, during the fall quarter of the 10th grade, students investigate issues of mental health through both humanities and biology. In the humanities class, students read *Slaughterhouse Five*. They analyze and study the literary conventions of the novel, which uses flashbacks, stream of consciousness, and dream sequences. This analysis supports their work in biology, where students study a set of mental health illnesses (bipolar disorder, major depression disorder, PTSD, schizophrenia) through a biological lens and identify the symptoms of the illness and the physiological aspects of suffering from the illness. The written assessment for the unit requires students, taking on the role of a psychiatrist, to diagnose the main character of *Slaughterhouse-Five* and find evidence for the diagnosis—in other words, to use textual evidence to support an argument. A teacher at Life Academy describes how the integrated curriculum "forces students to view a bigger picture of what they're learning in each class, and pushes them to think critically about how what we're learning here applies to what we're learning in our other classes."

The culminating and most rigorous work of Life Academy seniors is the senior research paper, a yearlong and multistage assignment that many graduates describe as one of the academic experiences that was most helpful for the first year of college. One of Life Academy's graduates now at Stanford University explains:

> We spend a lot of time on our senior project—in November proposing ideas, writing theses, over and over again, and learning all the little kinks of writing research papers—and my senior paper was 25-30 pages, so when I got to college and the professor said to write a research paper of 8-10 pages it seemed so much easier to me.

For the senior paper, each student researches a question that emerges out of her internship experiences and about which the student is authentically curious. For example, one student whose internship involved working with young children, who was interested in becoming a child psychologist, and who loved literature, chose to explore the question: "To what extent could literature help children cope with psychological problems?" To answer the student-selected question, each student conducts a scaled-down literature review, interviews an expert, writes a paper, and presents and defends findings to a panel that includes the advisor, students, and family or community members. As one teacher noted, "It's basically the same type of paper that I wrote for my masters thesis, just smaller." The student is truly at the center of this learning experience and is held to the standard of an expert in the topic.

Relevance: Connecting to the community and the student

The school's rigorous and complex design of the curricula, including the additional science courses for all students in Grades 10-12 and the senior research project, partly explain Life Academy's high graduation rate. But perhaps just as importantly, its teachers create opportunities for students to meaningfully connect with and access the challenging curricula.

For example, in the 10th-grade humanities class, to better understand World War I, students are asked to imagine being a soldier and to write a postcard home explaining some of the hardships of trench warfare. When they've completed the assignment, the class has a "cocktail party" where students mingle in the classroom, pairing up with a sequence of partners to whom they read their postcard. At the end of the cocktail party, students share what they learned from their peers. Creating a voice for themselves as soldiers and sharing their historically fictional experiences with each other helps to make the content engaging and real.

Aligned with the school's mission, teachers also facilitate connections between the students and the content through a social justice lens. In 11th-grade humanities, students read the book *Macho*, a novel about a young migrant laborer, to explore whether the author is conservative or liberal regarding immigration, and after reading *Native Son*, students play jurors to decide of what crime they would convict the main character, using evidence and quotes from the novel. And because the school culture expects its graduates to attend college, teachers explicitly connect their activities or assignments to what students will experience in college, even if only to keep students' attention during a short lecture. "Remember," the math teacher says, "We agreed that listening to a lecture is not that exciting, but this style of teaching is getting you prepared for colleges like Berkeley."

Just as significant as how teachers make the unfamiliar content accessible is how the teachers use what is familiar—the students themselves and Oakland communities—to create several courses and curricular activities that promote skill-building, self-awareness, and confidence. The sidebar on page 27 on Our Oakland provides such an example.

In the Spanish for Native Speakers classes, course projects are tied to students' lives and histories. An immigration unit requires students to interview a person who had immigrated to the United States, and then to create a poster and poem that synthesizes their learning. At Life Academy, all of the students in the course are children of immigrants, which therefore gives them an opportunity to know more about their families' experiences.

For Dia de los Muertos, a Mexican holiday that pays homage to the dead, students create memorials to a loved one who has passed, and the memorials are displayed prominently in the school's hallways. Students are heavily invested in these projects, which the teacher describes as "having to do with roots, having to do with history, having to do with everything," and they enable students to build cultural knowledge and self-knowledge while improving grammar, syntax, and vocabulary skills. Importantly, Life Academy teachers do not view students' experiences and relatable themes as distinct from academic skills and knowledge; instead, teachers leverage the familiar to build bridges to the unfamiliar.

Another example of how the school draws upon the resources of the students' communities is the school's post-session, which Life Academy conducts during the final weeks of the school year. Teachers design full-day intensive courses that draw from local resources, and students select their post-session course based on interest. The post-session courses enable students to fulfill college requirements for elective classes that, although in most schools would meet an hour each day across an entire semester, are instead concentrated into a few weeks of daily, full-day sessions. This design capi-

Instructional Snapshot:
Student-Centeredness in "Our Oakland"

In the ninth-grade humanities class, students studied two playwrights who interviewed residents and others involved in a neighborhood or event—Anna Deveare Smith's play documenting the Rodney King verdict and aftermath, *Twilight: Los Angeles, 1992,* and Jones and Newman's *Our America: Life and Death on the South Side of Chicago,* a compilation of stories written by two young African American boys who reported on their Southside community. The students then documented their own neighborhoods through interviews of family, neighbors, and day laborers. Students used the words captured in interviews to write documentary poems that expressed a theme of their city, and wrote an "assertion paragraph" presenting a concern they discovered through their research. The final product was a published book of their poems, paragraphs, and photography that was edited by the teacher. The book's front cover showcased artwork of one of the students selected by the class.

To assemble the book, the teacher assigned committees: the photography committee captured the city visually, an Oakland glossary committee created an index for readers unfamiliar with the youths' language, and a poetry committee determined the presentation and formatting of the writing. (Students had to rank their choice of committee and argue the Habits of Mind they possessed that qualified them for the role.) In May the book was published and sold to raise money for student activities. In the book's introduction, the teacher acknowledged that the students, who often wrote about problems and difficulties of their community, "also love their city and would hate for the work to condemn 'The Town.'" She closed with her expectation that the Class of 2013 would be agents for hope and promise, and grow up to be "changemakers right here in our Oakland."

talizes on the end-of-year energies of students while also building academic skills through students' interests and community resources, people, and history.

For example, in the World Foods course, students taste foods from Vietnam, Ethiopia, and Mexico (home countries of several of the students), visit restaurants in San Francisco, and prepare dishes. In addition to tasting foods, they learn cultural history of the nations and investigate how particular foods and spices migrated from one region to another. The Girls Got Game post-session class highlights and critiques cultural norms of beauty and health while simultaneously encouraging the girls, most of whom previously have had little opportunity to engage in organized sports, to participate in athletic events. The teachers organize each day so that the mornings are spent completing a strenuous activity, followed by an afternoon lesson or discussion pertaining to health and nutrition. They go on urban hikes through Oakland, complete a cross-country run, and several days each week they strength train in a local gym. They track their progress and nutrition throughout the 2 weeks and complete a 10-kilometer run/walk. Paired with these physical fitness activities, they watch the film *Real Women Have Curves* and discuss how standards of beauty in most Latino cultures are different than dominant white middle-class images of beauty. The post-session course World Activism and Dance (WAND) introduces students to major world political and social justice issues in addition to learning dance forms originating in those parts of the world. Over the course of 2 weeks, the students research issues such as the proliferation of HIV/AIDS in Cuba, female infanticide and women's rights in India, and drug smuggling through Nigeria. The students then celebrate cultural art forms with roots in those regions: hip-hop (with its foundations in West African rhythms and movement), salsa (the traditional dance of Cuba), and the popular contemporary Indian and south Asian dance Bhangra. Each week a different guest instructor from the Oakland community teaches the group dance techniques and choreography for each dance form. By the end of the course students are expected to create informational pamphlets designed to teach their classmates the issues and the dance form origins as well as perform three pieces of choreography.

At the close of post-session, students demonstrate evidence of their learning at the annual exhibition night. With the school auditorium full of families and school staff, students recite poems, perform dance routines, show video presentations and slide shows, display photography, and recite speeches. The post-session curriculum reflects the value the school places on the students: the students and their community are the source material for their learning as well as the demonstration of that learning. In addition, the post-session helps teachers have a greater sense of the whole student by inviting students to showcase competence in areas teachers previously did not realize they had. Seeing a student excel in a new context or skill can lead teachers, and the student as well, to see new potential outside of the post-session. Finally, the post-session helps to provide another kind of curriculum: exposing Life Academy's historically underserved students to many new experiences that, according to Life Academy's principal, are "an important part of educational institutions—social capital activities that happen in middle-class families."

Relevant learning in real contexts: Internships

Within its broad approach to creating relevant curricula, Life Academy, as a bioscience- and health-themed school within OUSD's constellation of schools, offers internships that give students a deeper and "real-world" understanding of bioscience, medical, and health fields. The internships have different schedules and structures based on the hosting site, but most often students attend an internship two afternoons each week from October through April during their junior and senior years. The internship is not an isolated experience within the school curriculum; teachers recognize how significant the internship experience is for students and orient their classes to prepare for and build upon the internships. Teachers in Grades 9-10 believe that part of their responsibility is to prepare students through "big, innovative projects that set you up skills-wise to be able to go out into the community and work in your internships," and the science curriculum often places students in the role of a doctor or scientist, and "because of the internships they're given, it feels very real to them."

Primary goals of the internship are to help students to gain the skills to create a vision for themselves in the field of healthcare, identify and understand health career options, practice professional skills, and serve their community. As a result of the internship and career information provided, 84% of surveyed students responded that Life Academy was helpful or very helpful in providing information about occupations (e.g., salaries, working conditions, and the future outlook of various occupations) compared to only 37% of the students in the comparison group. As one science teacher explains, it helps students experience the work world, and it also makes their experiences at Life Academy more meaningful and relevant:

> The internship is learning basic 21st-century skills, like how to be flexible, how to think on your feet, how to problem-solve immediately, but it's taking it and it's putting even more of an authentic lens on it because it's in front of someone completely new and different and your reputation's on the line. Leaving campus and going somewhere new gives an entirely different, new perspective on what students could do if they don't have anyone in their lives to help them create a vision for themselves. Kids learn how to navigate certain systems. I've had a lot of kids who came back after they went to college and said, "I was much more prepared because I learned how to ask for help in my internship." They had to learn that when things weren't going their way, they had to step up and say something instead of shy away and let things happen.

The school has entered into a number of partnerships in the Oakland community that give students a variety of engaging bioscience-related or health services-related internship experiences to choose from, and although the internships have now become fairly consistent from year to year, the kinds of internships and their sites can evolve and shift. In 2011, one student in the Community Health and Adolescent Mentoring Program for Success (CHAMPS) program at Oakland Children's Hospital did "rotations" to learn about four different types of medical-related services—physical therapy, insurance and billing, medical interpretation, and the medical clinic—and the experience reinforced her interest in medicine. A student who interned at Reading Partners, a non-profit that trains community members to tutor in elementary schools, was responsible for helping a teacher plan lessons and worked directly with students to improve their vocabulary and reading skills. Other students participate in internships at an elderly care facility, a non-profit community clinic, or even with Life Academy's own sixth graders on social skills development in the "Little Life" internship. The school is also responsive enough to student interests that it provides some flexibility; while it is preferable if a student stays in the same internship for both junior and senior years, the school will allow students to have a different internship in the senior year.

The internship provides other benefits to students besides getting exposure to professional work in health-related fields. The content connects directly to the school's curriculum; because students learn more about science fields in a real-world context, they can identify a more complex and personally meaningful research question for their senior project and have access to experts and resources to pursue the exploration of that question. The internships also create relationships with professionals that can result in summer or post-graduation benefits. Life Academy students have been paid for summer work following their internship, applied their internship hours toward clinical credit to earn their Medical Assistant certification, secured mentors during college, and even been offered full-time jobs after they complete college. Just as the internships provide opportunities for the students to become more involved in their community, these partnerships also bring representatives into the school. For example, an organizer from the community clinic facilitates a discussion and investigation into domestic abuse for sev-

eral girls in the school, and several internship mentors and supervisors sit on students' panels during their 12th-grade defenses.

As a hallmark of Life Academy, the internships are showcased each spring in the school's Health Fair and Internship Expo. Dressed professionally in front of a poster-board display, each junior presents information about his or her internship—the services of the organization and the specific experiences. The audience is a mixture of 10th-grade students, who come to the fair to learn about what the internship experience will be like for them as 11th graders, and 12th-grade students who come to the fair as evaluators—helping to score the internship presentations based on a rubric that evaluates students based on organization, voice, and body language. The rubric can be found in Appendix D.

Responsive curricula: Honoring student choice and voice

What makes Life Academy's curriculum most student-centered, beyond its rigor and relevance, is its responsiveness to the students' needs, strengths, and interests. Teachers design lessons that allow each student a significant amount of choice of how to enter with and engage the material, and students therefore can bring more of their own unique ideas and feel more invested in their learning.

One form of choice available to students at Life Academy is through a lesson's differentiated activities that allow students multiple entry points into a discussion depending on their skill proficiency or learning style preference. Students might be asked to provide their answer in multiple formats (writing, speaking, drawing) or invited to take on different roles in an activity. In a humanities class activity to analyze and discuss a very challenging text, many students were English learners for whom the text wasn't accessible. The teacher explained that in college, all students would likely find themselves confused by something they were assigned to read "but through talking about it you can get a deeper understanding." He therefore invited the students who could not understand the text to be responsible for asking questions, a role that gave them voice, engagement, access to the content despite lower skills, and even a frame for preparing for college. Choice is also a defining part of the internship; the school staff will go to great lengths, even finding internships that are only tangentially related to bioscience or health services, in order to satisfy a student's professional interests and passion. And the post-session activities are created, and chosen, based on students' interests.

Life Academy teachers at times also adjust the curriculum content itself based on student choice. The bioscience teacher uses what she calls "structured choice" by asking students to identify which labs for the year they're most interested in, and she then expands and deepens the work around those labs and concepts. When students one year were really interested in forensics, instead of having those students do traditional blood typing work, she created a crime scene with more complex problems for students to solve in which blood typing was one element.

Student choice is one of the most fundamental parts of the senior project. Life Academy pushes each student to ask a question of genuine interest, borne out of curiosity and

passion piqued during the junior year's internship, and then to "find the science" in that question. This push is to ensure students' authentic and sustained engagement with this long-term and complex project. As a senior teacher explains:

> You need to be passionate about the question you're investigating. Otherwise you're going to write a horribly boring paper and you're going to be in misery for the rest of the year. We hammered that home, so we get questions that kids are really curious about.

Connecting a student's academic and career passion to a research question is not an easy process. Students work on the research paper primarily in their college writing course, which is taken their senior year along with their English course, and they draft a proposal with their research question that, after approval from their college writing teacher, is submitted to their advisor for approval, a process that can take weeks. That so much attention and resources are invested in identifying a high-quality research question is a testament to how much Life Academy values deep questions, the authenticity of student-created questions, and the profound learning experience inherent in student-led investigation of their own questions. One student recalls the messages that underlie this emphasis:

> I feel like they expect a lot from us. With my senior defense I first chose a topic that I was interested in, but the teachers know that I'm really into community service, so they made me go deeper and change my topic three times just to get to the one that I was really passionate about. They said, "You know you can do better than that; don't set yourself for low standards."

This emphasis on student choice is about engagement as well as rigor; the school expects that each student can ask deep questions, and that the habit of asking hard questions, working to understand them, and then explaining the understanding to others is critical for college and career success.

Assessments of and for Learning

All aspects of the curriculum and pedagogy—rigor, choice, cross-content and skill integration, college and career preparation, inquiry-based opportunities, embracing mistakes, community-building—are woven into student assessments. The three different types of academic assessments—in-class assessments, certifications, and defenses—reinforce an academic program that places students at the center and believes in their potential for success.

In-class assessments

Teachers at Life Academy assess student knowledge and skills throughout the learning process. Teachers use homework and in-class warm-ups for assessment, but they also utilize the informal but deliberate structures of small or large group discussions to determine where students are on the path to mastery. Because their discussions are deliberately structured so that every student is required to actively contribute (e.g., assignment of roles, shared accountability within the group), the teachers can determine the students' individual understanding and gaps through careful listening, and provide feedback and interventions. Students provide feedback to their peers as well. For example, in the activity described above in which students wrote postcards as if they were World War I soldiers and shared them with their peers, the teacher told students, "We're now going to ask for positive feedback for the student writers," to which one student responded, "I liked how Isabel didn't write about the war happening; she wrote about what happens between battles when the runners are picking up the bodies." For these smaller-stakes assessments, students are frequently able to refine and improve their work based on the feedback and teachers' supports.

Certifications

Each core academic course has a set of higher-stakes assessments called *certifications*, benchmark performance assessments that students must successfully complete in order to pass the course. Certifications can be traditional tests, but they are often presentations, projects, and exhibits that allow students to demonstrate the culmination of several days or even weeks of learning. Some certifications include digital stories, mock Supreme-court trials, panel presentations, poster exhibitions, creative work, and performances, and are designed to mimic the certification process in the health professions where individuals must demonstrate mastery of a breadth of knowledge and skills before practicing. In the 10th-grade humanities class, for example, one certification requires students in groups to apply three critical lenses—Marxist, Freudian, and feminist—to a novel, and to present their literary analysis to the class. Certifications are assessed using Life Academy's Habits of Work rubric.

Teachers provide opportunities for students to redo certifications. For example, in the 10th-grade humanities class, one or two students each year fail to demonstrate mastery of this certification (because of absences, significant misunderstandings, incompleteness, or other reasons), which likely affected the performance of the group. The teacher's make-up certification requires the student to read a book chosen by the teacher and to convince three other students to read that book so that the student and their colleagues can participate in a round-table discussion, evaluated by the teacher. In what the teacher calls a *restorative* approach, the design of this alternative certification in part addresses the effect that not participating in the initial certification had on the student's peers, who were deprived of the student's participation. If necessary, students can even make up certifications over the summer.

Defenses

Life Academy students commonly describe the two hallmark defenses of knowledge during high school as their most challenging assignments: They are complex performance tasks that are developed over several weeks, sometimes months; they require an array of diverse college-preparatory skills and knowledge; and they are required for grade promotion. The first is the 10th-grade defense centered on an interdisciplinary humanities and science project about mental illness. The second is the defense of the 12th-grade research project, which is anchored in the student's internship in the health and bioscience field. For both events students prepare extensively to deliver an oral presentation to a panel that is made up of their advisor, another teacher, adult community members, and other students. The presentation is based on a written assignment and is assessed using the Habits of Mind rubric designed and vetted by the teachers.

The 10th-grade defense requires students to defend the learning from their mental health project (described above), when students apply their understanding of the physiological symptoms of a set of mental health illnesses in order to take on the role of a psychiatrist and diagnose the main character of *Slaughterhouse Five*, and defend their diagnosis using textual evidence. The humanities and biology teachers require multiple drafts of a written paper describing the diagnosis and evidence, each 10th-grade student's advisor gives feedback on the penultimate draft, and then the biology teachers evaluates the paper with a rubric. Students are expected to prepare a professional-quality PowerPoint presentation to explain their diagnosis that includes three quotes and accompanying analysis to support their findings. In front of a panel of two teachers, outside community members, and peers, the students each give a 15-minute presentation of their paper that includes time to address questions from the panel. A separate rubric, drawn from the school's Habits of Mind, is used to assess student performance during the oral defense. The students are given immediate feedback from the teachers and other panel members after their defense, but they have to wait until their paper grade is submitted to learn if they passed the entire defense. If students do not meet the standard, they present again in front of a smaller teacher panel and/or revise and resubmit their paper. It is a requirement for passing the 10th grade.

The 12th-grade defense, called the *senior investigative project*, showcases a student's original question and his or her findings. In the model of a social science research question, the project is an advanced version of the 10th-grade defense. There are three major components, some of which have been mentioned previously. First, the project requires that students use their inquiry skills in developing a research question that springs from their internship experience. Early in the academic year, all seniors write a proposal to their advisor introducing a topic and a research question in which they are interested. Their research topic and question must be approved by their advisor early on in the process. Second, to facilitate the investigative process, students write an investigative paper over several months that delves into their question through the Habits of Mind. This paper is revised and supported in large part by the senior's advisor. Third, students present their paper at their defense with a PowerPoint presentation in front of a panel that consists of their advisor, another teacher, partners in the health care industry, and community members, and the panel members are expected to ask questions and push students' thinking during the defense. Similar to the 10th-grade defense, it is high stakes—students cannot graduate from Life Academy without demonstrating mastery—and if a student does not pass the defense, the advisor provides support and guidance through the redo process until the student can pass. The senior defense protocol and rubric can be found in Appendix E.

In Life Academy's approach to assessments, there are several recurring themes. Students have choice and flexibility in how they demonstrate understanding (e.g., the research question in the 12th-grade defense, the diagnosis of the main character's mental illness) and can bring their creativity to the presentation of that understanding—while there are clear expectations for the content of the defense PowerPoint, students may be creative

with font, style, and animation. Students also assess their peers (giving feedback on the World War I postcard, sitting on defense panels), which requires them to deeply understand the teacher's expectations for high quality work and builds a critical yet supportive community of learners. Teachers also use assessments to identify when students have mastered knowledge and skills and when they need additional support, and the instruction and assessment design includes formalized opportunities for teacher intervention (multiple teachers review defense papers, teachers listen in on small group discussions).

Perhaps most importantly, Life Academy's approach to assessment includes revision. Giving students second or third chances—whether it is amending an assignment, redoing a certification, or representing the senior defense—reflects the school's larger belief that because the path to success will be different for every student and will undoubtedly include mistakes and failures, it is incumbent on the school to provide opportunities for revision and redemption.

The school, consistent with its deep belief in students' potential and growth from mistakes, treats the defenses and the certifications as assessments not only of a student's performance but also for *improving* a student's performance. This approach enables Life Academy to maintain its high academic standards as well as to give its students critical skills of resilience. For a student population that has experienced struggle in so many ways, and will likely encounter many more struggles, it is crucial to Life Academy's work that students learn how to succeed from failure—to not be afraid of high standards, but instead to be ready to learn, grow, and have a vision for ultimate success regardless of the challenge.

Supports for Success: A Network of Caring Adults

> We don't bring the bar down for them. We have that expectation to set the bar high. I scaffold and support you to get there; you can get there. ALL of our students.
>
> *—10th-grade humanities teacher*

Life Academy's academic program, thoughtfully designed and executed, would not achieve its success were it not for its unshakable belief in every student's potential to be successful and its web of comprehensive student supports. Support is interwoven into classroom instruction and the relationships between teachers and students, but the school also formalizes support opportunities—academically, socially, and psychologically—in its after-school programs and partnerships as well as through advisory.

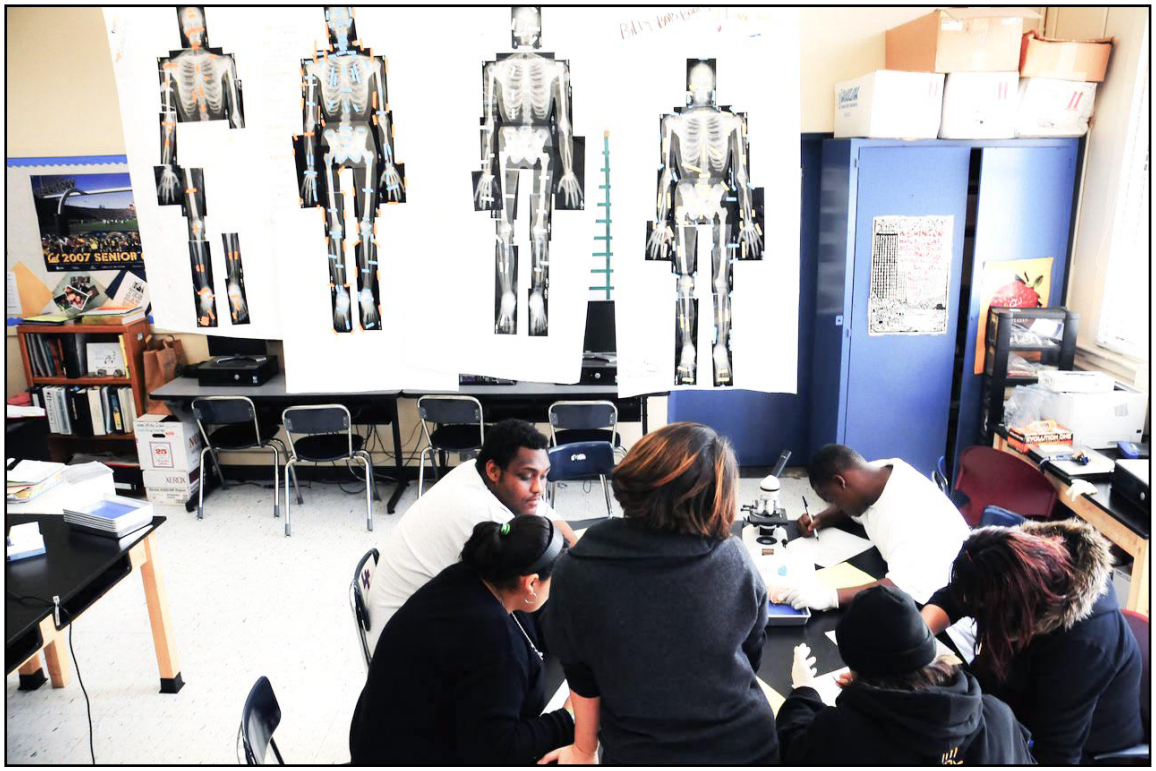
Academic supports

Much of students' academic support is embedded within the core academic classes. Teachers plan productive group work and discussions in part to formatively assess their students and then provide supports in the moment. For example, in an 11th-grade humanities unit on figurative language, students were assigned a short essay connecting

figurative language to a novel's theme. After handing in a draft of the essay at the beginning of class, the teacher asked them to write, as their warm-up, examples of figurative language that were familiar to them. During this activity, the teacher did quick assessments of student understanding by looking at the submitted homework, and then by listening to student responses to the warm-up. This was then followed by peer-editing of the essays. While students were engaged in the peer-editing work, the teacher helped individual students who were struggling and directed them to their notes, highlighted words, pointed to missed questions, and then led a mini-discussion with the entire class that addressed class-wide trends in misunderstanding.

Teachers balance high expectations for their students with a sensitivity to their real-life challenges, a sensitivity that doesn't compromise high standards but instead is based on their relationships and knowledge of each student, supported by the school's personalization structures. A student explains, "The teachers don't just tell you to do your homework and then just leave it at that. If you don't have the time to actually do it because you have family issues at home, the teachers might give you an extra day."

Teachers also create larger, structural academic supports by adjusting their "first teaching" course content or skills based on the unique needs of each year's students. For example, one year the English teachers realized that the 12th-grade students had mastered how to ask complex questions around big ideas because the 11th-grade curricular focus on research and essay writing had given them lots of practice, but the students had some grammar weaknesses. As a response, the teachers decided to place a much greater



emphasis on grammar because, as the English teacher for 12th grade explained, "In college the professors are going to have a hard time looking past all the ugliness of the students' grammar and spelling and formatting and that kind of stuff that we say doesn't matter but it really does." In addition to changing the curriculum because of student needs, course scope and sequence are adjusted to reflect current and community events; this means content is connected to the events and becomes more relevant and engaging. For example, science courses rearrange their sequence of content to accommodate an Alzheimer's walk or a conference by the Lymphoma Society.

Beyond the time within academic classes, several teachers are paid to stay after school to provide tutoring—required for students who have poor grades, and voluntary for others—and other teachers help with credit recovery during the summer. For English learners in early stages of language acquisition, Life Academy has a separate reading intervention class that uses Read 180, and teachers are trained in English language development strategies that they integrate into their instruction to support English learners. Two resource teachers work in both pull-out and push-in formats to provide assistance and monitoring for students with special needs. Less formally, teachers at Life Academy choose to be available for students during lunch or before and after school to provide support. One student reflected:

> If you're not getting it, the teachers will stay with you until really, really late even though they don't have to. They will stay with you and they will explain it until you get it, and even if you get frustrated, they won't let you give up.

Alongside its college-preparatory instructional program, Life Academy provides significant support for students throughout the college application and admissions process. The student handbook includes for each grade level a college admissions checklist that includes the important steps of registering for admissions tests, setting up an e-mail account for college correspondence, applying for financial aid, and attending regional college fairs. In addition to the school's advisors who provide information and coach students throughout the application process, the East Bay Consortium runs the school's on-site College Career Information Center (CCIC). Staffed by UC Berkeley students, many of whom are bilingual and grew up in East Oakland, the CCIC provides many resources critical to a school community in which only 6% of the students responded that a parent completed an associate or bachelor's degree: one-on-one workshops with students, academic tutoring and test preparation, and financial planning. This unique battery of supports is an invaluable source of information to students: 89% of Life Academy students identified the school as being "helpful" or "very helpful" in understanding the admissions requirements for different types of colleges, compared to 47% of the students in comparison schools.

Life Academy's pedagogy and curriculum design, network of supports, and commitment to its beliefs about the potential of every student make for some remarkable student feedback (see Table 10).

Table 10: Student Experiences of Teacher Support

In three or more of my core classes my teachers…	Life Academy students, agree or agree strongly	Comparison school students, agree or agree strongly
My teacher notices when I am having trouble learning something.	57%	39%
My teacher will help me catch up if I am behind.	67%	41%
My teacher checks to make sure we understand what he or she is teaching us.	72%	58%
My teacher often asks me to revise my work after I get feedback from teachers or other students.	67%	41%
My teacher pays attention to all students, not just the top ones.	88%	74%
My teacher believes I can do well in school.	88%	74%

Source: Student Survey

Supporting students' social and psychological needs in and after school

Life Academy recognizes that in order for students to succeed academically, the school must address students' social and emotional needs as well. As a math teacher explains,

> Particularly at urban schools I don't know if students necessarily come in feeling safe, and they need to have that kind of fundamental part of Maslow's hierarchy to be fulfilled before they can even start learning or opening their minds to critical thinking.

A key role for advisors is to be aware, through the advisory classes, firewalks, and field trips, of what circumstances or events outside of the school could jeopardize students' success. With all of this information, and because of the relationships between students and teachers, the school staff, including the counselor, can mobilize quickly to respond quickly to student needs. As a 12th-grade college-writing teacher notes:

> I was concerned about one of my advisees and I sent an e-mail to her teachers about her mental health. I got 10 responses immediately, and the counselor pulled her out of class and talked to her and I was calling home. It was just this amazing huge effort within an hour. I don't think that really happens in other places. It feels like there's a possibility to help students in multiple arenas of their life, which is fundamental because if they don't have those needs met then they really can't learn anyway.

To bring additional expertise into the school to help students with these complex needs, as well as to reinforce Life Academy's culture and values, Life Academy has several institutional partnerships, the range and volume of which are particularly impressive given the school's small size. During the school day, graduate students enrolled at the Wright Institute, an accredited graduate school that awards masters degrees in counseling, complete their residency requirement by taking on a caseload of Life Academy students that receive counseling. The Native American Health Clinic runs the school's health clinic and leads peer health education groups, and Mills College leads several college readiness programs. For after-school programs, a local non-profit, Alternatives in Action, acts as the lead agency to coordinate a wide array of organizations that provide students with supports and opportunities. Students can attend two after-school art programs, Town Visionaries (ninth grade) and Visual Expression (10th grade), and a coach from Alternatives in Action facilitates a group that trains students in peer conflict mediation and problem solving. The Ancestry Project, funded through the Alameda County Supervisor's office, helps students to explore their genealogy and family history, and Scientists in Charge has ninth graders lead project-based experiments for fourth graders at two nearby elementary schools. Football for Life, a soccer program that has a curricular focus on social justice, and two clubs—the Be A Man (BAM) circle for boys and the Real Ambitious Women (RAW) circle for girls—build self-esteem and provide a forum for conversations about teen issues. Even though the after-school clubs and activities are optional for students, teachers, particularly advisors, help to guide and encourage students to participate. Life Academy's community program director, paid by a local non-profit, coordinates all of the school's partnership organizations. The funds for these programs, including the salary of the program director, do not come from the school's per-pupil revenue, but are paid for through grants.

The after-school programs' philosophy and approach perfectly align with Life Academy's: personalized and supportive relationships between the adults and the students matched with engaging and meaningful learning experiences. The community program director's explanation of the importance of these two concepts could just as likely be spoken by any of the Life Academy teachers and staff:

> I think the relationships that get built with the coaches, the youth coaches, and the participants in the program are just so powerful and none of the rest of the work could happen if those initial relationships weren't really built. The level of care, support, ongoing encouragement, follow-through, and realness that happens between the staff and the students is one of the strengths. Also, the intention around bringing in real opportunities through projects or through these performances really changes the way that students engage and what they're able to produce.

[13] National Council on Teacher Quality, *Teacher Quality Roadmap:* Improving Policies and Practices in Oakland Unified School District, March 2013, 38-39.

Engaging parents

With its focus on students, Life Academy recognizes that parents and families can play a critically important support role for their children. However, with such low rates of post-high school attainment among its students' families, Life Academy understands that many students' parents may not have had successful or positive high school experiences themselves, and therefore may be less comfortable or equipped to provide that support.

The advisor, through home visits, hosting student-led conferences, and being the liaison between their advisees' parents and the school staff, develops mutual trust and understanding that creates parent-school partnerships centered on supporting students. Additionally, at the beginning of the year, the school surveys the parents to learn what topics are of most interest, and then they design workshops twice each month on those topics and based on ongoing feedback—another example of the school's valuing choice and being responsive to the needs of the learners. Workshop topics have provided English language instruction, brought families to the school's health clinic to discuss its resources available to students, and given parents tips about how to talk in healthy ways when children challenge parental authority. The relationship with parents is strong enough to extend beyond a student's four years; parents of former Life Academy students, supported by a school staff member, lead Life Academy's parent outreach. Both English- and Spanish-speaking parents contact current students' families of upcoming meetings and encourage them to volunteer at the school.

The academic program, paired with its personalized relationships, creates an environment in which everyone—students as well as teachers—believes that they have the potential for success. And just as students need a web of supports to realize their potential, the school provides teachers with layers of professional support as well.

Teacher Development and Support

It takes a very special kind of person to be a teacher at Life Academy—professionals who have the vision and skills to build trusting and personal relationships, hold uncompromising expectations for college preparation work, implement differentiated scaffolding and responsive support, and engage in productive group work with colleagues. While the school has an infrastructure and culture to develop these skills and beliefs, a ninth-grade English teacher explains that it is deliberate about identifying those qualities among its teacher applicants:

> We hire teachers who have an orientation of caring about more than just subject matter but serving students and the population. We are extremely cautious when hiring; that's why you see so many student teachers hired because we've vetted them ourselves in order to trust. We take that piece very seriously in order that we hire teachers who care about the community, they care about the students—more than just a teacher-student relationship, they care about you as a learner. We try to hire really reflective teachers who want to stay in the learning process themselves—they want to act as students themselves, so it's easier to model that in your classroom if that is the orientation you come in with.

Teachers bring a genuine curiosity and commitment to learning from each other and supporting colleagues that create an informal network through the faculty family: Teachers share curriculum, seek out a colleague to be a thought-partner or the special education resource teacher for expert advice, or just lend an ear when a colleague is struggling with a student. Of surveyed teachers, 92% report that their colleagues review student learning and understanding in order to adjust their practices, compared to 75% for teachers in the comparison schools. For the teacher new to Life Academy, a majority of the courses' curricula and school-wide rituals (such as the defenses) are well established and documented, which provide a battery of resources to ease transitions.

Life Academy has struggled somewhat with formalizing professional development that addresses teachers' needs, but in 2013-14, teacher learning is being led by the school's Instructional Leadership Team (ILT), six teachers elected by their peers to make strategic and big picture decisions for the school. In this shared leadership design, the ILT frames the yearlong professional development arc within an essential question, such as, "How are we as teachers interrupting patterns of injustice?" To explore this question, and address other professional and school needs, the teachers meet on Wednesdays from 1-4 p.m., when students are dismissed early. Separate from this school-wide professional exploration, every other week, in 4-week blocks, teachers choose three of four different professional development topics: literacy, backward planning, cooperative learning, and intervention. At the end of the year every teacher will have had some in-depth experience with three of the four content areas. In these topic meetings, led by

a member of the ILT, teachers will examine and try out new practices across grades and departments. In the alternate weeks, teachers meet as departments and grade levels to discuss common challenges, upcoming assessments, readings from professional journals, or best practices.

Twice each year, Life Academy's faculty and staff take an overnight retreat for the adults to reflect deeply on their work, review data, tackle thorny issues, build relationships, clarify a shared vision, and collaboratively plan. The retreats are a major strategy of the school to build adult morale while also maintaining a common focus for the future. With concentrated experiences of the retreat, and the daily collaboration and support, the faculty and staff have strong relationships and a high level of shared trust, even admiration, which sets the conditions to learn a lot from each other. An English teacher says, "I like and respect all of my coworkers. I think they're tremendously hard workers and I have a lot to learn from them."

As a result of Life Academy's faculty commitment to learning and working together, 100% feel that when making important decisions, the school always focuses on what's best for student learning, compared to 62% of teachers in the comparison schools.

A constant challenge for Life Academy is that, as part of the Oakland Unified School District, their teachers earn salaries lower than the surrounding districts, while also serving a higher need population. While the starting salary is slightly less, on average, than the nearby districts, the maximum salary is at least $10,000 less than the other districts, making long-term retention of teachers nearly impossible.[13] Life Academy struggles to provide a compensation package that reflects the time that teachers invest in supporting students and improving their own practices.

The teachers face several challenges that teachers in small schools encounter. Because Life Academy serves only 273 students, there are only three or four teachers for each of the core subject areas (and only one teacher of foreign languages and other non-core subjects), and likely only a single teacher for any individual course, a stark contrast to larger schools in which there are multiple teachers for every subject and course. In these larger school communities, teachers have many colleagues with content-specific knowledge with whom to share practices, ideas, and curricula, a dynamic that does not exist at Life Academy. For some teachers at Life Academy, being the only teacher of a course limits not only professional growth, but as one teacher reflects, it may negatively impact her students:

> It's a product of being at a small school that I'm the only algebra teacher. I'm the only ninth-grade algebra teacher on the team, so I have nobody to share ideas with, I have no one to share questions with, and essentially I'm doing this alone, which is really dangerous for these students because all that they're getting is what I'm making, how I'm making sense of things.

However, for other teachers, Life Academy is so unique, and the relationships and community among them so critical and definitional to their work, that having a small number of committed faculty satisfies professional development needs, and some believe is even superior to what could be provided by others from outside their school community because, as one teacher describes, "There's just a lot of knowledge in the room." As described above, particularly in a small school like Life Academy, teachers wear many hats: advisor, academic content teacher, college counselor, post-session teacher, ILT member, after-school tutor, etc. They must also be, to some extent, content generalists, because in a small school there aren't enough students to warrant hiring elective teachers. Therefore, in contrast to the subject area specialization that is expected in large schools, teachers in small schools must draw upon their hobbies and interests to provide students with elective content. One way that Life Academy tries to address this particular small school dilemma is by teaching elective courses at the end of the year in the post-session, which allows core subject teachers to focus on their primary subject area classrooms during the majority of the year without diverting attention to an elective course responsibility. Compounding the problem of teachers being spread too thinly is that because the staff know students so well, they are acutely aware of all the students' needs, individually and collectively, yet with a limited number of staff, there simply aren't enough people to support all the student needs they identify. The principal described a recent example when the faculty unanimously acknowledged that students needed to have more leadership opportunities, and a staff member needed to lead this effort. However, despite all teachers agreeing that it was a need, none felt the capacity or energy to support it.

Teachers are privy to a wealth of information about students—much of it about challenges that the teachers never faced and that can seem overwhelming. It can be difficult for them, with minimal training in addressing these complex issues normally left to social workers and psychologists, to absorb and process the difficulties their students face in their Oakland neighborhoods. In addition to the daily adversity faced by students, Life Academy has to endure awful events. In the span of two years, three of Life Academy's students were shot and killed in their community—a tragedy for any school, but in one that is as close-knit as Life Academy's, it was devastating to teachers and students alike. As supportive as the environment is, managing the psychological and social challenges the students face while also creating high quality instruction and supports can be, as one teacher described, "exhausting." With limited resources, and seemingly unlimited needs, the school always runs the risk of burning out an overstretched staff.

A key strategy of the school to retain its staff reflects its approach to students: just as the students stay at Life Academy because of their strong relationships, high expectations, and the school's vision for student success, the teachers are engaged in the school for the same reasons. As one college-writing teacher explains:

> I feel like we are interrupting patterns in small ways and I think that the focus on the sciences through the internships and through double sci-

> ence classes and through our cross-disciplinary projects that have a science focus is just a really good hook for kids, and it's extremely relevant considering the lack of people of color in medical professions. I just am really behind everything that our school does, which makes me feel good because it's already a really hard job. It's a really hard job, so if I didn't love my administration and my co-workers and the philosophy of our school it just wouldn't be worth it to me because I put too many hours in.

Teachers feel supported because they share a common sense of mission and purpose with the school community and feel cared for and supported by their colleagues.

A final irony of the staff being so student-centered is that they prioritize time, resources, and attention for the benefit of students even when the decision results in less support for the needs and interests of teachers. As one teacher describes,

> We make our decisions as teachers and as a school based on what is best for students even if it impacts other things negatively. I suppose a lot of times what's best for teachers is also best for students, but I don't think that's always true.

An example is the humanities class: a double-block course in which a single teacher integrates English and social studies. Because the school prioritizes the relationships between students and teachers, it asks a teacher to teach their core content (English) as well as content outside their expertise and training (social studies), and to integrate them into a single, double-block course. This decision creates stronger relationships, class blocks that allow for extended learning, and integrated content, but it asks a teacher to be responsible for material that they often may have to learn themselves.

Interestingly, it may be that when Life Academy prioritizes students it is actually investing in them as a long-term strategy. Focusing deeply on students—their relationships and support for each other, their voices and ownership, and their confidence in their potential—empowers them to be a resource that the school depends on to achieve its goals. Students are at the center of Life Academy, as a mission and as a strategy.

Conclusion

Life Academy has achieved significant success but continues to face a number of challenges—some that are simply due to it being a district high school in California, and others that it faces because of its own mission and practices.

As part of the district, Life Academy also faces tensions between being part of the larger 48,000-student district and preserving its unique 273-student school identity. For example, as the district has decreased the support it provides to small schools compared to what Life Academy received at its inception, there is less willingness to sustain the relatively high per-student cost of Life Academy, and the principal has found himself defending the school's design and success, which he believes is only possible in a school of its size. To protect the school from having to take 100 more students, for example, the principal has argued with some success that because of its higher graduation rate than other, larger schools, Life Academy is actually more efficient and has a much lower cost-per-graduate than other schools.

Another set of challenges arises because of Life Academy's successes. OUSD, recognizing the benefits of Life Academy's internship design, has supported internship programs at other high schools. But because the number of internship slots in the city, particularly in East Oakland, is limited, Life Academy has found that its internship sites have reserved slots for other high schools, reducing the availability of internships for Life Academy's students. Life Academy's growth and accomplishments position it as a model for the region, so the district frequently pulls the principal from the school to participate in district committees and other events; in a small school with limited staff, the instructional leader's absence is felt acutely. In the 2012-13 year, the superintendent asked Life Academy's principal to serve on the district's bargaining board as it negotiated a new teacher contract, a responsibility that required him to be in meetings twice each week; that obligation, along with mandatory offsite district professional development every other Thursday, meant that the principal was away from the school 2-3 days each week throughout the year. He therefore spent little time supporting individual teachers and shifted more responsibilities onto school staff who already wore multiple hats. With a new superintendent, and a stronger ILT structure this year, the principal and staff are optimistic that he will be more present and that professional support around instruction will be less dependent upon him.

Yet despite all of these challenges, students and teachers at Life Academy are in a journey together:

> Interviewer: What is this school about?
>
> Student: I mean, in general, the school is about health and bioscience, but within the school, inside it's about empathy and understanding each other.

The teachers believe deeply in the students' potential and construct a series of strategic steps to ensure that success: build relationships, maintain high academic expectations, and provide responsive and personalized instruction and support. The school takes great pains to create structures, rituals, and instruction that give students opportunities, voice, and multiple chances at success. Life Academy's mission to disrupt the patterns of injustice and inequity is mediated through every aspect of the school, a vision that students recognize and internalize for themselves and apply to their peers:

> I receive high expectations from the teachers. They know that we have this high potential to do anything we put our minds to and that we're capable of doing greatness, which is true, and they hold us to the high standard to be professional and to be meta-cognitive sometimes and to ask questions and not be fearful, 'cause no question's dumb.

Because Life Academy focuses so intently on students, their strengths are revealed and realized, and the teachers' beliefs in students' potential become true. As one ninth-grade teacher notes:

> We are going to rally behind intellect and watch our students shine, and we're going to really champion that. We champion kids and make them feel really successful and they are. They blow us out of the water all the time with what they're able to do.

Appendix A: Methodology and Data Sources

Life Academy High School

The case study employs mixed methods, with data drawn from multiple sources, including interview, observation, and survey data. Interviews were conducted of school staff, parents, current students, graduates, and community members. Surveys were administered to teachers, students, and graduates. Observations were conducted of classrooms, staff collaboration and professional development, and performance assessment activities. Graduate college attendance data was gathered from the National Clearinghouse data set. Student achievement data was gathered from data available to the public from the California Department of Education. The table below provides a detailed accounting of the data sources.

Type of data source	Number
Administrator interviews	7
Teacher interviews	9
Student focus groups	1
Parent focus groups	0
Community member interviews	0
Graduate interviews	6
Classroom observations	22
School observations (Cinco de Mayo assembly, after-school program)	2
Professional development/collaboration observations	2
Performance assessment observations (five senior defenses, three 10th-grade, two post-session, three fire-walks)	13
Student survey	135 surveyed Response rate 40%
Teacher survey	13 surveyed Response rate 81%
Graduate survey	62 surveyed Response rate 27%

Appendix B: Life Academy Graduation Requirements

a. 4 years of English
b. 4 years of science (with additional science courses in Grades 10-12)
c. 4 years of math
d. 4 years of social studies
e. 2 semesters of bioscience or health-related internship
f. 2 years of foreign language
g. 1 year of PE
h. 1 year of fine arts
i. Successful senior defense

Typical 4-year course sequence at Life Academy:

9th grade	10th grade	11th grade	12th grade
English	Humanities	Humanities	English AND College Writing
Social Science			Government/Economics
Algebra or Geometry	Geometry or Algebra II	Algebra II or Pre-Calculus	Pre-Calculus or Calculus
Biology	Advanced Biology	Chemistry AND Physiology I	Physics AND Physiology II
Physical Education or Art	Physical Education or Art	Internship	Internship
Ethnic Studies	Spanish I	Spanish II	AP Spanish (optional)

Appendix C: Daily Schedule

Monday	Tuesday	Wednesday	Thursday	Friday
Check In 8:15-8:20	Check In 8:15-8:20	Check In 8:15-8:20	Check In 8:15-8:20	Check In 8:15-8:20
Period 1 8:25-9:17 (52 minutes)	Period 1 8:25-9:17 (52 minutes)	Period 1 8:25-9:04 (39 minutes)	Period 1 8:25-9:17 (52 minutes)	Period 1 8:25-9:17 (52 minutes)
Period 2 9:22-10:15 (53 minutes)	Period 2 9:22-10:15 (53 minutes)	Period 2 9:09-9:48 (39 minutes)	Period 2 9:22-10:15 (53 minutes)	Period 2 9:22-10:15 (53 minutes)
Period 4 10:20-12:10 (110 minutes)	Period 3 10:20-12:10 (110 minutes)	Period 3 9:53-10:32 (39 minutes) Period 4 10:37-11:16 (39 minutes)	Period 4 10:20-12:10 (110 minutes)	Period 3 10:20-12:10 (110 minutes)
Lunch Break 12:10-12:50	Lunch Break 12:10-12:50	Period 5 11:21-12:00 (39 minutes)	Lunch Break 12:10-12:50	Lunch Break 12:10-12:50
Advisory 12:55-1:40 (45 minutes)	Advisory 12:55-1:40 (45 minutes)	Period 6 12:05-12:45 (40 minutes)	Advisory 12:55-1:40 (45 minutes)	Advisory 12:55-1:40 (45 minutes)
Period 6 1:45-3:30 (105 minutes)	Period 5 1:45-3:30 (105 minutes)	Lunch Break 12:50-1:30	Period 5 1:45-2:35 (50 minutes)	Period 5 1:45-2:35 (50 minutes)
		Teacher PD/ Collaboration / Staff Meetings 1:30-4:00	Period 6 2:40-3:30 (50 minutes)	Period 6 2:40-3:30 (50 minutes)
	Extended Day Program 3:45-5:30		Extended Day Program 3:45-5:30	

Appendix D:
Internship Program—Health Fair Presentation Rubric

Category	Below Basic (0-2) No Evidence of Grade Level Mastery	Basic (3-4) approaching grade level mastery	Proficient (5) grade level mastery
Voice Score _____	• Does not speak clearly or loud enough for the audience to hear. • Uses improper grammar and may revert into slang or nonspecific language. • Speaks in a monotone voice with no inflection, no excitement.	• Speaks in a loud clear voice that the entire audience can understand. • Uses appropriate language, but may have minor errors in grammar or pronunciation. • Has a sense of tone, but may not always match presentation.	• Speaks in a loud clear voice that the entire audience can understand. • Uses appropriate language throughout presentation. • Changes tone of voice to match the presentation.
Body Language Score _____	• Nervous jitters and/or joking around detract from presentation. • Student leaning or sitting on chair/table for support. • Reads only from poster and does not make eye contact with audience. • No use (or inappropriate use) of body language—may have back to audience as reading poster.	• Stands up straight but may have some visible jitters. • Makes limited eye contact with audience. • Limited use of body language.	• Stands up straight with a comfortable relaxed posture. • Makes eye contact with audience and is looking for opportunities to connect with audience. • Body language matches the passion and emotion of the presentation.
Organization Score _____	• No student introduction is made. • Poor organization evidenced by moments of silence or unclear information. • Participant off task or having side conversations during presentation.	• Student introduction is made, but poorly delivered. • The presentation is organized; however, some presenters may have moments of confusion. • Information is presented well, but could be more detailed and complete.	• Student introduction is confident and well-delivered. • Organization is clear; presentation is well organized, sequential, and well supported by detail. • Participant is on task and speaks confidently during presentation.

Appendix E: Life Academy Senior Defense Protocol

Section	College writing class max. time limit	MA class max. time limit
1. INTRODUCTIONS Student's advisor takes charge to... • Facilitate introductions of panel members. • Time keeper: Hold up hand with number of minutes at the end of time so senior knows when to finish. • Explain process, key objectives, and roles. • Hand out the following: 1. Grading rubrics to advisors and community members 2. Feedback forms to 11th-grade students **Make sure the senior has given the panel three copies of the ppt. slides.*	5 mins.	5 mins.
2. SENIOR POWERPOINT PRESENTATION • Please make sure senior has access to Internet since all PowerPoints are in Google Docs.	15 mins.	10 mins.
3. CASE STUDIES • *First 5 minutes: Advisor projects case study that has already been prepared specifically* for this student given the 3 medical conditions that they have become an expert on. • Advisor reads case study with student out loud. • Student gets remaining time to pick at least 3 pieces of evidence that support a solid diagnosis of that patient. • *Last 5 minutes:* Student explains his/her logic in diagnosis of the patient in the case.	10 mins. *Only in MA class!	10 mins.
4. DEFENSE (QUESTIONING PERIOD): • Student should ask if there are any questions to transition over to this section of the Defense. • Ask to see students' resources slides to check their use of evidence. • Please take notes and begin to grade students on the presentation rubric. • Students are to close with reflections (slide will accompany) after the questioning period is over.	10 mins.	10 mins.
5. DISCUSSION & CONSENSUS • Ask student to step out. • Use the last page of the rubric to tally the scores. • Panel should come to consensus around each section of the tally sheet to determine if a student has passed.	5 mins.	5 mins.
6. REVEAL SCORE TO SENIOR • Invite student back inside. • Offer warm and cold feedback from each of the panel members. • Advisor reveals if they have passed. • If student has not passed, schedule them for a presentation on May 29th & record it on the Google Doc titled *Senior Defenses 2012* at a later time. • Make sure to thank all panel members for participating.	5 mins.	5 mins.
7. TRANSITION TIME BETWEEN DEFENSES • There is an additional 15-minute transition time to ensure that Defenses run on time. If you run over, you have this time period to recover. • Compile all rubrics, 11th-grade feedback forms, PowerPoint slide handouts, and investigative papers into a packet and attach with a paper clip. Turn in packets to Ms. Rigotti after your last Defense on Friday afternoon.	15 mins.	15 mins.

Appendix F: Life Academy Senior Defense Rubric

Evaluator's Name: *Relationship to Student:* *Student's Name:*

Senior Defense Habits of Mind Rubric

Directions: Welcome to the Senior Panel DEFENSE. Below is the rubric you, as the panel, will be using to determine if the student passes his/her DEFENSE as a graduation requirement from Life Academy. Please see the scoring sheet to determine if the student has passed his/her DEFENSE.

Habits of Mind:	**Not passing (1)**	**Not passing (2)**	**Passes w/ reservations (3)**	**Passes (4)**	**Passes w/ distinction (5)**
EFFECTIVE COMMUNICATION • I can speak clearly using academic language, proper sentence starters and organization. • I can demonstrate good body language and eye contact when speaking to the group. • I can organize an interesting PowerPoint that has minimal text, interesting pictures, and transitions.	**Explanation and Notes:**		**Explanation and Notes:**		
PROFESSIONALISM • I can dress to impress by wearing professional dress. • I am ready to present on time and the presentation is neat, organized, and finely polished.					
PERSPECTIVES • I can develop a strong stance on a topic to answer my question (hypothesis). • I can apply context, background, and information to frame the problem or question. • I can identify a clear purpose and explain why it is important (internship and field of science). • I can identify multiple perspectives on the topics in science especially with issues of science and controversy.					
EVIDENCE • I can provide compelling and accurate evidence from multiple sources in the form of facts, quotes, or data. • I can collect both literature and field research for data. • I can connect specific data to support my arguments. • I can organize, present, and cite the information clearly and properly.					
LOGICAL REASONING AND ANALYSIS • I can articulate clear steps of the investigation with clear purpose. • I can support conclusions with evidence or data to accept or reject the hypothesis and explain why/how. • I can explain why the hypothesis was rejected. • I can support/defend methods and conclusions in a well-organized and convincing way.					

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